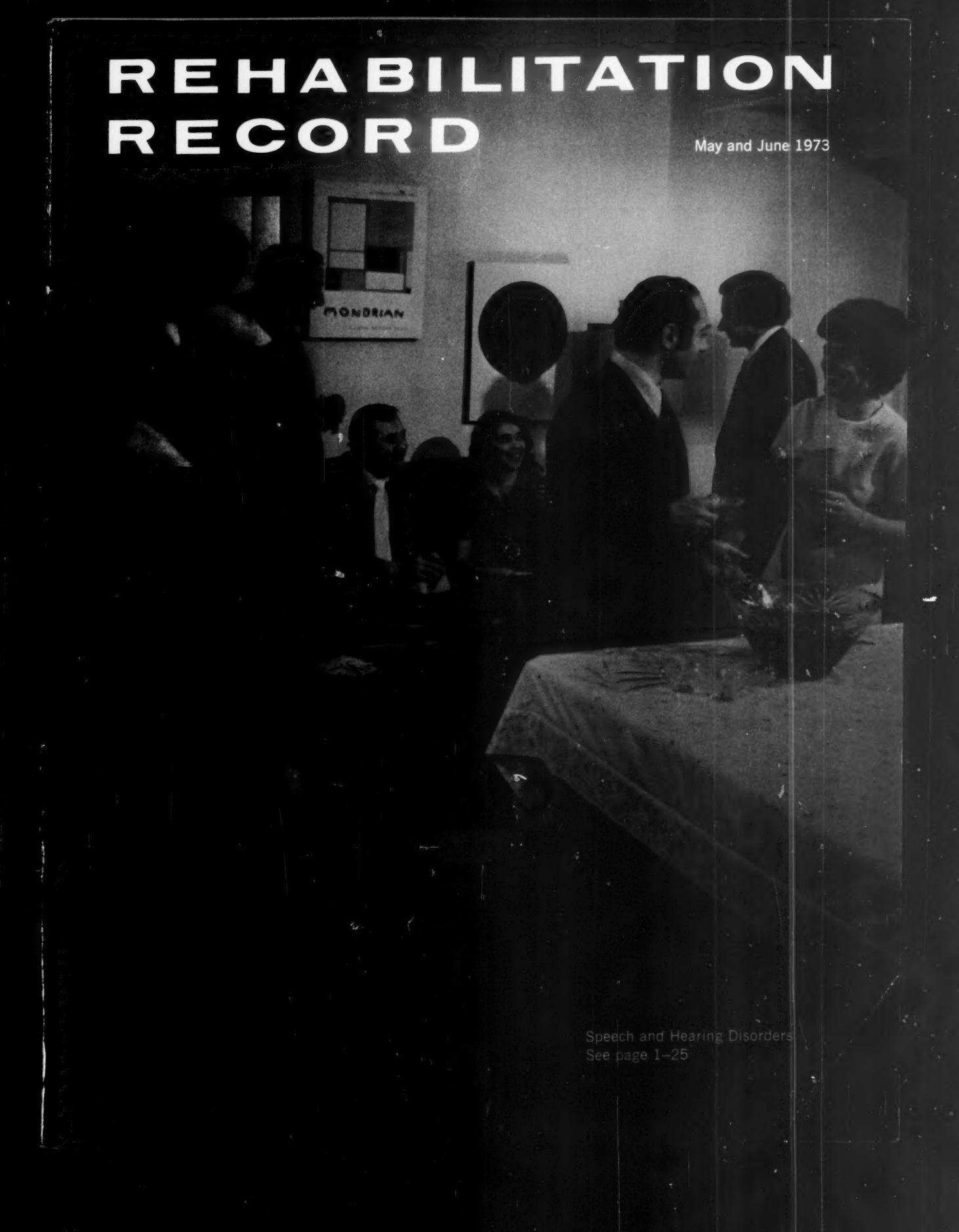
REHABILITATION RECORD

May and June 1973



Speech and Hearing Disorders
See page 1–25

Instead of dealing with things themselves, Man is . . . constantly conversing with himself. He has so enveloped himself in linguistic forms . . . that he cannot see or know anything except by the interposition of this artificial medium.

Ernst Cassirer

Man
Language
Speech

And The Symbolic World

Communication Disorders

Front Cover Photo by: Norman Tavan
HEW Photographer

Human Communication Disorders

Jamil I. Toubbeh, Ph.D.

FRANK
Case No. 302112M

Frank is 48 years old. His wife describes him as a "very gentle father and very devoted to his work." According to his employer, he is "very competent, industrious, and well-liked by everyone." Frank's medical and psychological records indicate that in his premorbid state, he was in good health, emotionally stable, and of superior intelligence. His police record indicates he was discovered unconscious in a stalled vehicle, heading into a one-way street.

Dr. Toubbeh is Chief, Manpower Resources Branch, Division of Manpower Development, RSA.

Frank suffered from a cerebrovascular accident (CVA, stroke). From his wheelchair, one year later, he writes:

Sped and Heaping Coler
I had a stroke a years
ago. The stoke was in right.
side of my Brain leinng the
left of my hoddy suffing.
I had good Use of my a
which supise to me. r, .
(Boddy).
I am saine ? — I can't
talk. I can put in Tounge
in corner in my meuth.
It effected my abily Talk—
Spelling — My memory. the
put un something to thought
With — and my musicles
abity. Need help.
FRANK

As a "speed reader," Frank enjoyed reading on a variety of topics; as a musician, he played several instruments. Considering the devastating and catastrophic effects of the stroke on his physical, psychological, emotional, and social status, Frank is "not doing too badly." He is able to "converse" with a few people, particularly with those who know about his special disability. He is hemiplegic and aphasic.

Secondary to the CVA, he suffers from bladder and bowel incontinence, oro-muscular insufficiency, and intellectual and communicative deficits. He

"goes into fits of depression," reinforced by his inability to (re)capture the basic elements of communication. Somehow, to him, words have lost their meaning. "Words . . . words . . . words . . . shelflaw . . . and . . . and . . . oh, bitch . . . damn it . . . I know, but I can't," he often says when he is fatigued.

His attention span is short. His memory for events, past and present, seems to be lost. *Coffee* becomes an *apple*, and "Mary had a little '*calf*'—no! 'goat'." He enjoys company, but can't cope with so many well-intentioned friends who constantly talk about his past. But his family never fails to come to his assistance. They play a "guessing game," and there is always a breakdown in communication which only helps to aggravate his condition.

The nation's population includes over 2,000,000 persons who have survived strokes. Of these, an estimated 400,000 or more are aphasic and share similar problems with Frank. There are 200,000 others who, because of tumors or traumatic accidents (war, auto, and industrial), live to share with Frank a partial or total loss of the ability to communicate—a prerequisite for survival in any society.

The population of American adults suffering from aphasia today exceeds 600,000.

Jerry: Case No. 2,100,102M
Susan: Case No. 1,304,205F

Jerry and Susan are 18 and 22 years of age, respectively. Their hearing impairment was detected during their first year of life. Both have identical hearing losses, affecting the speech frequencies. With the aid of hearing devices, their language and speech developed normally—a credit only to their parents who have been conscious of the special needs of the hearing impaired.

Both graduated from high school. Jerry is presently attending college, while Susan, his sister, remains a burden to her family. Jerry appears to have adjusted to his hearing impairment; his sister has not. Attempts at rehabilitation have failed.

She has no contact with the outside world, preferring her home environment, long hours of sleep, television, and her parents, with whom she rarely communicates. She has succeeded in alienating her high school friends. Her resistance to counseling is very strong, and she refuses to accept any responsibility, whatever its nature may be.

Over the years, the burden of this unrecognizable disability on Jerry's and Susan's family has been heavy. First, the disbelief that "our child" is hearing impaired; the guilt feelings associated with the birth of a second child who, shortly after birth, was discovered to have a hearing loss; then, the birth of the third child, whose life had to be monitored daily until she was diagnosed as having "normal" hearing.

SUSAN Case 1,304,205F

JERRY Case 2,100,102M

Second, the realization that the hearing loss was a fact and that something had to be done about it. What, then, are the procedures to follow in order to minimize the effects of the hearing loss on the development of the children: Medical and otological examinations? Audiological assessments? Psychological tests? Hearing aids? Special education? Counseling? Availability of services? How costly? How often? For how long?

Twenty years later, similar questions are being asked. There is still some concern about Jerry's residual hearing. It appears stable, but will it continue to show this stability at 25, at 30, or at 40 years of age? Susan's hearing is stable, too. But what about her future? At 22, she is heavily dependent on the limited resources of her family. The parents continue to search for solutions.

There are over 9 million Americans who have auditory problems of one type or another which are less severe than deafness but which impair communication and, hence, social efficiency. There are those who are born with hearing impairment, as Jerry and Susan; those who acquire the impairment as a result of disease; and those who "lose" their

hearing over a period of time consequent to noise or old age.

Tom: Case No. 309,199M

Tom is a young lawyer who is quite conscious of the high premium which society places on verbal communication. His speech is dysfluent. He is a stutterer. "I sense a situation where I am liable to stutter before I speak," he says, "then, sensing that situation, I try to overcome the normal feeling of saying nothing and speaking. Social settings force me to speak. I start speaking with a great deal of apprehension and fear, saying what I have to say as quickly as possible, without control, perchance I won't stutter. If I 'block' in the process, I get terribly anxious, and anxiety leads to more serious interruptions in my speech."

The primary reason for the initial fear is "I am ashamed of my stuttering and don't want people to know I stutter. Once I stutter, the major feeling I have is that of self-degradation."

When Tom was a first-grader, his report cards reflected his abnormal speech behavior. The children ridiculed him. He learned to avoid speaking situations, and, to avoid speaking situations, he learned to avoid people, because people, well-meaning as they may be, by their suggestions and reactions, made the stuttering not only more difficult to bear, but also more severe and frequent.

Stuttering cuts across cultures and appears to be one of those universal afflictions which affects mankind. The population of stutterers of all ages in this country exceeds 1.4 million.

Although the literature on stuttering is voluminous, the etiology of this disorder remains a mystery. What is not a mystery, however, is the ever-present fact that people who have this disorder constitute a large segment of our population: their disorder hinders their social efficiency.

Communication and Speech

Like wasps and bees, and birds and monkeys, people are gregarious. Gregariousness implies some sort of activity, some sort of communication, meaningful or nonmeaningful. In the animal kingdom, those who fail to "communicate" become alienated. A "communication disorder" is tantamount to a death sentence!

Homo sapiens, fortunately or unfortunately, are not as benevolent. *"If you have something to say, say it! If you can't say it, write it!"* If you happen to be a stutterer, you are out of luck (your pride would be hurt "writing it"); if you are an introverted dyslexic, it's really tough; if you are hard of hearing, the signal you have just perceived may be so attenuated and distorted that your response would turn your would-be listener off; and if you are aphasic, you are surely a retardate. But you continue to live.

The penalties associated with communication disorders are varied and almost limitless. It is to the credit of man that he learns to communicate verbally to some degree despite what appears to be insuperable odds against learning. After 9 months of peaceful coexistence with his quiet environment, he still faces the challenges of new worlds, head-on, with missing teeth and walking, anxious Websters. He has to make it somehow! The words must come out: nasal, belabored, monotonous, or whatever, and despite cerebral palsy, cleft palate, deafness, aphasia, and myriad other disabling conditions.

Human communication is action. It is action with varied ingredients: hearing and vision; language and speech; touch and interpersonal relationships. Human communication is power: It is life or death; peace or war. It is an extension of the self. Through the use of linguistic symbols man has the capacity to reduce other men to naught, facilitating their extinction without guilt. Human communication is culture; it is the history of man; it is the fabric of all societies. Its absence negates man's existence.

The greatest burden of human communication is carried by speech. Speech involves the generation and reception of complex acoustical signals. The mechanism which facilitates the generation and reception of these signals is the brain—the central nervous system. But the brain, as generator and receptor of these signals, cannot function effectively and efficiently without other support systems—endocrine, respiratory, muscular, skeletal, etc.

Speech production is highly affected by an imbalance or malfunction in any of these systems. Vocal quality and, hence, the quality of speech, for instance, can be altered by parathyroid, adrenal, and pituitary gland diseases. Ovarian changes can have an effect on vocal cord function. (Pity the star who has to perform strenuous roles while menstruating!)

Speech, as a by-product of brain activity, may also be affected by lesions in various "levels" of the brain. The voice quality of persons with multiple sclerosis is strikingly monotonous and scanning.

"High level" lesions can cause central auditory disorders (central deafness), reading and writing difficulties, and various types of aphasias. Because so many of the cranial nerves outside the central nervous system are involved in the mechanisms of speech and of hearing, a breakdown in or malfunction of any of these nerves can disrupt, to some degree, the effective and efficient functioning of the brain, and the process of communication.

The dependence of communication, in particular verbal communication, on the synergistic function of complex physical, physiological, and neurological systems, makes the process of communication highly susceptible to disorganization. Studies attest to the high incidence of speech, hearing, language, and deafness disorders in the nation's population. Present estimates indicate there are over 20 million persons in these disability categories who could benefit from professional services.

But there are other factors which may contribute to disruption in the communicative process, namely, social and cultural forces. A case in point is stuttering where feedback from the social environment tends to aggravate or reinforce the dysfluent speech.

Cultural deprivation, particularly in the early stages of life, may have as detrimental an effect on a child's linguistic abilities later in life as would a congenital communication disorder.

Finally, one cannot discuss social and cultural forces in the context of communication without alluding to dialects and accents which may, under certain circumstances, be considered disabling conditions. For instance, what is today referred to as black dialect is, in essence, an evolving dynamic language, reflecting a changing black society. It is a living language, with a structure of its own. Yet, it may be considered a liability in the ears of some of its listeners.

Accents, too, may be disabling in a society that values Standard American English and its phonemic structure. "I love to listen to Abba Eban; he has such a perfect British accent. But I turn my TV off when Mr. Guidino speaks." And you know the rest of the story. . . .

Man's Measure of Success

Mastery of the linguistic symbol and the ability to express that symbol verbally and graphically have permitted man to record his experiences and to benefit from the experience of others. Through these media, man has been able to relate the past to the present and to the future. He continues to do so. The measure of his success has always been his ability to communicate.

The communicatively disabled are mankind's disadvantaged minority. Their disability hinders their social efficiency. Their creative potential and contribution to society remains untapped.

The Rehabilitation Services Administration has committed itself to serving this disabled population. Much remains to be done, however, to seek and to identify those who can benefit from professional guidance and services. If the nation is committed to saving lives, it should also be committed to helping the unfortunate disabled survivors. ■

Communication Process

Seldom does the typical American think of the complex mechanism by which we acquire knowledge and communicate with others. The whole mechanism can be likened to a computer with the senses providing the input; the brain doing the programing, storing, and interpreting of the information; and the output being primarily speech and writing. Thus, hearing is one of the major means of input. The programing and interpreting within the brain is language. And a large portion of the output is speech.

The disorders which interfere with the communication process may relate to the ear and auditory tract in such a way that the messages do not come through with enough amplification to be understood, or they may be received in some garbled manner. As the brain receives the information, various disorders may interfere with interpreting the messages, storing the information, and generating meaningful language. Disorders which interfere with speech may relate to the structures producing speech such as the larynx which includes the vocal cords, the palate, and the mouth which are commonly considered when there is a speech disorder or no speech at all. However, these structures may be normal and the problem may actually be one of poor muscle coordination, deafness, a language disorder, a nervous system flaw or an emotional problem.

All ages are affected by problems of communication. They are particularly noticeable in the very young and the aging. Early diagnosis of children is important since language is developed before a child begins school. ■

Noise Pollution

Hearing Conservation

John J. O'Neill

One of the most obvious results of our technology is that it exposes all of us to noise. Like air and water pollution, most of this noise is the result of our having made certain technological choices without fully considering their impact upon the people who have to live with them.

During the past few years, in addition to federal action, State and local governments have begun to propose a wide spectrum of statutes and regulations to deal with the effects of this pollution. The laws focus on two areas, the protection of hearing and the creation and maintenance of a more quiet environment.

The popular literature in this area makes rather strong allegations about the detrimental effects of noise. The public is being constantly exposed through the press, radio, and television to material that stresses its potential hazards. The results of recent research, however, do not offer too much support for statements that noise can seriously affect mental and motor activities or functions, such as heart beat, pulse rate or breathing. The research does indicate, however, that noise has definite effects upon speech communication. Also documented is its annoyance to people.

On the other hand, we do know that noise can produce three kinds of damage to the ear. It can produce a temporary hearing loss, a permanent hearing loss or permanent injury to the inner ear.

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Measurement

Noise, which has been referred to as unwanted sound, can be described in terms of several characteristics. The major characteristics that need to be considered are magnitude, frequency (see fig. 1), and temporal distribution.

The magnitude of a noise level is described in terms of decibels which are an expression of the sound pressure level or, in lay terms, the loudness of the sound.

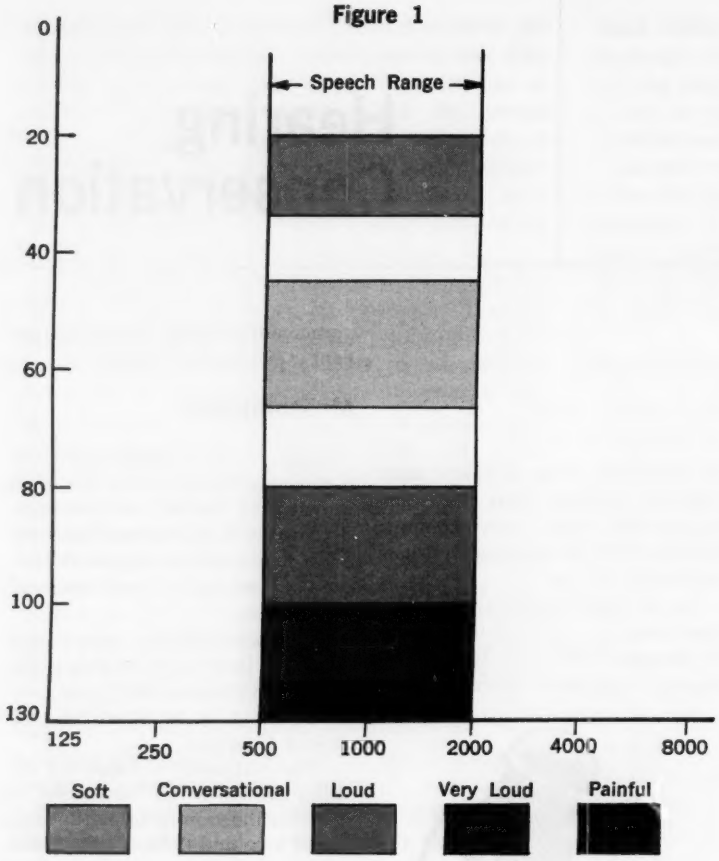
The evaluation of frequency distribution gives an indication of whether the sound is primarily made up of low, mid or high frequencies. This calculation is very important because human ears are more sensitive to high frequencies.

Finally, the length of time the noise is present has important implications. If it is of a relatively steady nature, it will have less of an effect than if it varies rapidly or is impulsive, such as a sound made by hammering.

Magnitude, our first characteristic, is measured with a sound level meter, which is a light, compact, battery-powered instrument. The meter has three weighting scales (an A, B and C scale). These three scales duplicate the response of the human ear to various frequencies. The A scale, which is used to measure low intensity frequency sound, is the most frequently used scale.

The readings from the sound level meter are reported in decibels in terms of the scale which was used

Figure 1



in the measurement. The levels reported in this article will usually include the notation dBA which indicates the measurement was made with the A scale. This scale is commonly used because it is the most effective measure of the effect of noise on people.

An octave-band analyzer, which has a series of filters that represent various frequency bands, can be used in conjunction with the sound level meter to give a reading of the frequency bands that are present in the noise. Through the use of these two devices it is possible to determine the concentration and magnitude of a noise. (Temporal distribution is obviously measured by its duration, and is evaluated by means of a graphic level recorder which provides a tracing on a moving paper chart.)

The significance of the measures described above can be demonstrated by listing the magnitude of some representative noise levels. A 10 decibel sound would be just audible while an environment with a level of 50 decibels would be considered to be quiet. The sound level of a television set in a house would be 65 or 70 dBA. An automobile moving at 65 miles per hour would produce 77 dBA (measured 25 feet from the car), a power mower 96 dBA, and the noise inside the cockpit of a light aircraft would be 90 dBA.

Frequency distribution is dependent upon the characteristics of the source or sources that produce the noise. Examples of the types that can be found in the everyday environment are: automotive noise which is primarily concentrated in the lower frequencies but with tire noise consisting of high frequency sounds. Industrial productions will have a variety of frequency characteristics depending upon the particular machinery that is producing them. In the instance of air exhaust units, the noise will have high frequency components while impact noise produced by punch presses and stamping machinery will have low frequency components. Compressors produce mostly midfrequency pollutants.

Commercial jet aircraft noise is concentrated in the mid and high frequencies. There will be differences related to the type of aircraft, load capabilities and takeoff and landing activities. Power mowers, chain saws and outboard motors will have a variety of frequency characteristics which are dependent upon the size of the motors and the type of muffler attached.

Exposure to a noise of 80 to 90 decibels for 8 hours is hazardous. A person experiencing such exposure for 20 years or more will experience a permanent loss of hearing. Examples of such a hearing loss can be found in persons working as jute weavers, textile workers, boilermakers, and foundry workers. On the other hand, if a person is exposed to 130 decibels for only 5 minutes he would be in danger of sustaining a permanent hearing loss.

The results of a selective survey conducted by the National Institute for Occupational Safety and Health which involved 341 plants and a quarter of a million workers was projected to the entire work force employed in industries represented in the survey. It indicated that over a quarter of a million workers would be exposed to noise with a level over 90 dBA, a figure slightly larger than the selected sample!

Sound levels of 60 to 80 dBA can cause annoyance in terms of interference with sleep, rest and relaxation, and with such diversions as the

hearing of radio or television. It should be kept in mind that annoyance has many different connotations to different people, and it will vary with persons and situations. If the noise for the three octave bands with frequencies centered at 500, 1,000 and 2,000 Hz, is at a level of 65 decibels, people will not be able to converse at a distance of more than 3 feet.

Approximately 34 million people suffer a total of several hundred hours of speech interference yearly as a result of exposure to construction site noise in the U.S. Approximately 20 million of these people must communicate in noise environments which seriously interfere with speech intelligibility and/or demand significantly increased vocal effort.

Hearing Conservation

The basic purpose of a conservation of hearing program is to protect the hearing of workers as well as to prevent their suffering a hearing loss. The following activities are undertaken as a part of such a program: 1) The location of areas or situations that produce noise that can be harmful to hearing, 2) the discovery of workers whose hearing is endangered, and 3) the suggestion of appropriate protective measures. The program involves a team approach with the team including an ear specialist (otologist), an audiologist*, a plant physician, and a safety engineer.

The key activity in such programs is the testing of hearing which involves the use of the audiometer, an electronic hearing test instrument which produces sounds at designated frequencies and allows for accurate control of the loudness of the sounds. The results of the hearing test are recorded on the audiogram,

a graph that contains a representation of a range of frequencies from a low frequency of 125 Hz through a high frequency of 8,000 Hz, as well as a range of intensities from a faint level to a high level of 100 or 110 decibels. The results are compared to what is called the "normal" threshold of hearing.

Another part of the program involves a survey of various areas of the plant to determine noise levels. On the basis of such a survey a protective program is undertaken. It can involve the issuing of protective devices, the quieting of noisy machinery or the removal of workers from a designated area.

The most efficient protective device is not a wad of cotton or a finger in the ear but well fitted ear plugs which are introduced into the ear canal or an earmuff-type device which covers the entire outer ear. (You've probably seen these in use by ground crews at modern, jet-servicing airports.) These devices provide anywhere from an 11 to a 30 decibel noise reduction.

With the passing of the Walsh-Healey Public Contracts Act and the Occupational Health and Safety Act of 1970, the Federal Government has established standards which state that a person should not be exposed to more than 90 dBA of noise for an 8 hour working day. In addition several States provide compensation for noise induced hearing loss.

An approach which goes a step beyond the usual scope of a hearing conservation program places emphasis on what can be done for the person who has actually suffered a permanent loss of hearing. It involves a comprehensive evaluation of remaining hearing to determine if the person can benefit from a hearing aid. (Also, see in this issue Jerome Alpiner's discussion of this topic.) If he can, he is advised which aid would be of greatest benefit to him. Once he has obtained a hearing aid, he should be scheduled for training in its use. Also, he may need additional training in lipreading as well as counseling in the areas of psychosocial and vocational problems. Every effort should be made by industry and vocational counselors to encourage people with noise-induced hearing losses to take advantage of these types of services.

Environmental Control

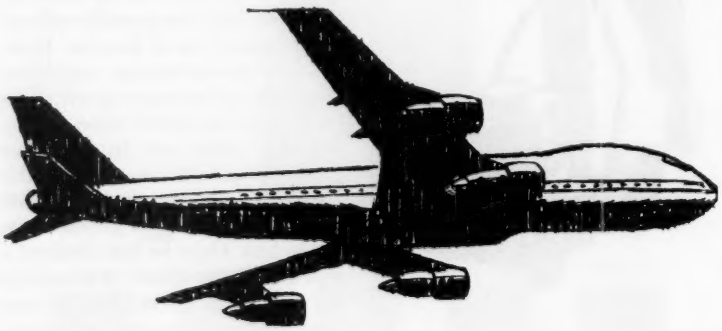
Recently, the President signed into law the Noise Control Act of 1972. It established noise emission standards and prescribed levels of noise exposure around airports. Also, several States are preparing regulations for noise emitted from stationary sources, airports, transportation and construction work. These proposed regulations contain restrictions upon noises greater than 60 to 70 dBA. Rather than simply indicating the nuisance aspects of noise, these regulations actually out-

*An audiologist is a person who has been trained to provide diagnostic evaluation, habilitative and rehabilitative service and research related to hearing.

line noise levels, in decibels, which allow for control of the noisiest of such sources. The levels are based on human reactions to noise—especially as they relate to annoyance and interference with speech communication. This latter area is included because researchers have found that one of the more serious effects of noise on man is the interference of noise on man's efforts at speech communication.

Vocational Implications

The person who suffers a hearing loss because of exposure to noise may find that it interferes with his working abilities or he may be required to change his form of employment. Because noise-induced hearing loss is permanent, medical therapy will not help. In fact, prevention is the only therapy that will have any value.



The following case histories provide examples of persons who have sustained a hearing loss because of exposure to noise:

• **Joseph E.** is a 21-year-old college student. He requested a hearing test because he had noticed that he was having difficulty in hearing what was being said to him—especially in classroom lectures. He indicated that his hearing loss had become progressively worse during the past few years and that he experienced at least once a week, a high pitched ringing in his ears. He had been exposed to a considerable amount of noise while driving a tractor, working in a machine shop, and working for the past 2 years at a construction site.

The results of the hearing test indicated that Joe had a definite loss of hearing for higher frequencies, for both ears, with the hearing loss becoming progressively worse from the mid frequencies through the higher frequencies. A previous examination by an ear specialist did not reveal any significant findings and a hearing aid evaluation had indicated that he could not benefit from a hearing aid. He reported that he had experienced difficulties while working in situations that required contacts with the public. Also, he had been experiencing a great deal of difficulty in the classroom.

Presently Joe is enrolled in a program of academic counseling. Also, he is receiving training in lipreading and auditory training that he might prepare for employment.

• **Alvin L.** is 48 years old. He has been employed in a steel mill for 15 years. The mill has a very high noise level which contains high frequency sounds. An examination by an ear specialist had indicated that there were no apparent abnormalities but an audiometric test showed pronounced loss of hearing for the frequencies from 1,000 to 8,000 Hz with the greatest loss occurring at 4,000 Hz. The evaluators recommended that Mr. L. either be fitted with protective ear plugs or be removed from his work station. For the present, evaluators determined that he did not need a hearing aid evaluation. They did recommend, however, that he consider enrolling for some training in lipreading and be scheduled for periodic rechecks of his hearing.

Approaches for Counselors

If a loss of hearing is severe enough to constitute a substantial handicap to employment, the client will need to be restored to gainful employment that will be compatible with his interests, aptitudes, and abilities. The counselor should assist in coordinating the rehabilitation program. To do so he will need to keep several points in mind when he encounters people who have been employed in noisy settings.

First, the counselor should be sensitive to the possibility of decreased sensitivity to high frequencies (4,000 Hz and above). Such a loss of sensitivity may go unnoticed by the client since these frequencies are not of major importance to speech reception. Yet, with increasing exposure over the years, the frequencies important to speech may become affected.

Also, the client can be exposed to noise which may not be hazardous but may be loud enough to interfere with adequate reception of speech. This can, of course, lead to a reduction of efficiency on the job. Also, noise on the job may cause annoyance, increase physiologic reactions to it or disrupt concentration. And, again, the counselor should keep in mind that there may be cumulative effects because of exposure over a period of time.

By asking appropriate questions the counselor may be able to more adequately serve his client, anticipate his problems, and provide him with advice before it is too late. With the increasing attention that is being paid to this pollutant, the counselor will need to be ready to play a very active role in the rehabilitation of people who have been exposed to noise. ■

Rehabilitative Audiology

Jerome G. Alpiner, Ph.D.

A 35-year-old mother of four makes an appointment for an evaluation at a speech and hearing center. Several months before, she had been a patient in a local hospital and had received a life-saving medication. As a result of the drug, however, she suddenly had lost a considerable amount of hearing. Her initial reaction to this trauma was one of panic and depression. Her ability to communicate had been abruptly terminated, and her role as a mother and spouse was in jeopardy. Her physician said the loss was permanent. . . .

A social worker telephones a clinical audiologist to discuss a 45-year-old black client with a hearing loss. His client refused to wear his behind-the-ear hearing aid which had been purchased just a month before. In an appointment with the audiologist, the client revealed that he could not wear the hearing aid because neighborhood children continually teased him about the object behind his ear. Further investigation got to the heart of the problem: the aid was light tan, the client quite black. The solution was equally simple: provide a darker shade hearing aid (same model).

The audiologist received a telephone call several months later from the social worker to inform him that his client was wearing the aid and was quite happy. His attitude had changed, and he was functioning well in his job. . . .

These two examples of actual cases may be repeated everyday for countless other persons in the U.S. Although the problems may be different, the basic issue emerges in the need to communicate effectively. The inability to do so often proves degrading.

Yet the ability to hear is very often taken for granted by people with normal hearing. The trouble sometimes stems from the fact that hearing loss is not as visible and, therefore, not as obvious as other handicapping conditions. I make this point not to minimize other handicaps but, rather, to emphasize that the person with hearing loss can lose his self-identity in a normal hearing world without others ever being aware of the trauma resulting from this problem.

About 5 percent of the population of this country suffers varying degrees of hearing impairment. Since there are many degrees of hearing loss, the clinical audiologist has an enormous responsibility in evaluating these people and aiding them in minimizing their problems. The need is to help them communicate as effectively as possible in a society in which communication is mandatory for existence.

Causes of Hearing Loss

Hearing impairment may result from such illnesses as mumps and measles, or from a variety of other conditions such as *prolonged* exposure to loud noises, or *sudden* intense noises, such as explosions; some types of drugs used in treating various illnesses and diseases; accidents; and the aging process. These affect the sensori-neural portion of the ear and are permanent types of hearing loss. In some cases, the hearing loss may be progressive. This situation is particularly true in cases of loss due to the aging process.

Hearing loss may also be caused by other factors which affect different parts of the ear, other than the sensori-neural mechanism. Ear infections are an example of this type. But here normal hearing may be restored through proper treatment. For this reason a person with hearing loss should be seen by a physician to determine whether or not the problem may be treated medically and/or surgically.

When a person is born with a hearing impairment he does not have the opportunity to develop speech and language in the same way as normal hearing people. Generally, such congenital hearing loss means that the impairment occurred prior to the acquisition of speech and language. When the hear-

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Audiologist instructs an adult group in speechreading techniques.

ing loss is profound, some of these people may not be able to acquire fully the complete mastery of the language, even with the help of a hearing aid. Their vocal quality also may be different since the opportunity never existed to know how normal speech sounded.

Although there is some confusion as to labels for impairment, the terms deafness and hearing loss are frequently used synonymously. Those persons who have congenital losses often are referred to as deaf and those who acquire hearing loss after learning speech and language are referred to as hard of hearing. There are approximately 300,000 persons who are considered to be deaf as compared to the approximately 10 million labeled as hard of hearing.

Some congenitally impaired persons use sign language as their primary means of communication. There is an increasing emphasis today to train young deaf children in "total communication," which is a combination of oralism and sign language, so that they may acquire as normal speech and language as possible. This approach may be used when there is some doubt as to whether or not a child may succeed in speech and language development with only an oral habilitation approach.

Although the primary emphasis in this article is on the problems of the hard of hearing, it is important for all persons who have contact with anyone who has hearing loss to be aware of these basic differences, even though the differences stated here are oversimplified.

Rehabilitative Methodologies

The basic concept underlying rehabilitative audiology procedures is to restore the client to such an effective communication level that he can adequately function in his environment. Even though most cases of hearing loss are not medically correctable, it is important that the audiologist obtain a

Client receives instruction in preparing for a hearing evaluation.

medical evaluation before proceeding with rehabilitation procedures.

On the professional side, the audiologist should possess the appropriate credentials. He should have the Certificate of Clinical Competence, issued by the American Speech and Hearing Association.

There are a variety of rehabilitative audiology procedures that are available for hearing impaired persons. Speechreading (lipreading) is one such procedure which helps the person "fill in the gaps" in those cases where the hearing system is not operating at maximum capacity.

Many laymen think of speechreading as a complete substitute for a loss of hearing. This is not the case since about 65 percent of the sounds that make up the speech are not visible on the lips. Too often, the client enrolls in a speechreading group thinking that he will be able to identify speech by observation of the lips only. Speechreading, therefore, needs to be defined in a much broader sense.

It does mean, to a certain degree, the ability to identify certain sounds of speech that are visible, which may help to fill a gap for sounds not heard normally. For example, the sound for (p), (b), (m), (f), and (v) may be identified on the lips during speech conversation. There are many other sounds, such as those for (h), (k), (g), and (r) which cannot be seen on the lips. In addition, speech moves so rapidly that it may not be possible to place in appropriate context the sounds that are visible. Speechreading, therefore, does have limitations in understanding communication fully.

We now need to add the other dimensions of the speechreading process which also contribute to understanding what is being said. This is the development of good listening skills. The major segments of therapy will focus on developing this ability.

If a person is not a good listener, if he is not alert to the possibility that somone is about to convey a message, then he may miss much of what has been said. Even hearing persons fall down on this trait, but how much more important is it for the hard of hearing!

Gestures and facial expressions also provide important clues to the hard of hearing. A wave of the arm may warn of danger; a smile may express gratitude; a frown displeasure.

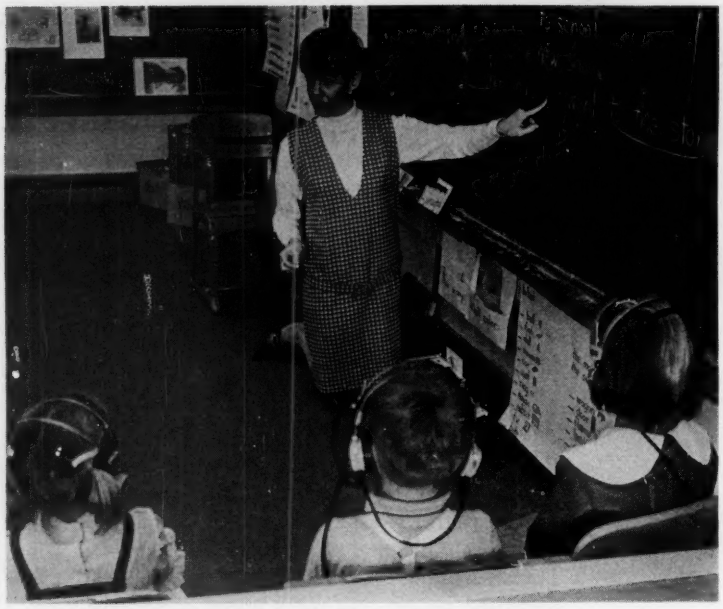
Environmental clues may also provide information without speech being utilized. A hearing impaired person may see a group of his friends at a sporting goods store hovering around bowling balls; interest is centered there and is likely to be the center of conversation.

The case in point then is that there are a variety of factors that allow a person to be a better speechreader. The person's task is to understand the thought of the communication without having to identify every speech utterance. When he can function in this capacity, he will have fulfilled that critical need to understand and to interact.

Hearing aids and auditory training play an essential role in rehabilitative audiology. As indicated previously, hearing loss varies considerably, and it is essential that a hearing evaluation be accomplished initially so that overall communication function may be assessed.

There are three major aspects in a hearing evaluation which are of primary concern to the audiologist in planning a rehabilitation program. These factors are considered by the audiologist before he recommends a hearing aid. They are: 1) the extent of the hearing loss, which will indicate how loud speech must be for understanding; 2) the clearness with which speech is understood; and 3) the factor of loudness when amplification must be so intense that its level is intolerable to the person.

Through amplification, speech can be made loud enough for the person to hear it, but it still may be unclear. That is, it may sound muffled and distorted because the hearing mechanism is no longer func-



A group of young deaf children receives instruction on intonation and groups of words.

tioning efficiently. Thus, many cases of sensorineural hearing losses result in speech not being clear even though it is presented at a comfortable level with some type of amplification.

Auditory training is one aspect of therapy which helps persons with hearing losses to better adjust to hearing aids. It is an important aspect of therapy since most of the hard of hearing can wear aids with varying degrees of success. The use of speechreading and auditory training are remediation procedures which help in effective communication. Where there is but a mild hearing loss and an aid is not warranted, speechreading and auditory training may help improve communication.

The denial of a hearing loss is a common phenomenon. This is especially true when the loss is mild. Consequently many persons become embarrassed because of their condition. They will often bluff their way through communication situations; sometimes their feigning will succeed, but as often it will fail. Thus the audiologist is challenged to help them overcome negative attitudes about themselves.

In attempting to modify attitudes, the audiologist often works with groups of clients. This helps the client realize that hearing loss is not unique to him; emotional support is afforded by group interaction. As a member of the group, the client will be encouraged to admit to hearing loss and not to be reticent in asking people to repeat what was said when the communication was not thoroughly understood. But, in addition to these group trends, the skillful audiologist will consider individual needs and will concentrate on their resolution.

Total Programing

Although I have concentrated on audiological rehabilitation, the skillful audiologist never forgets that he is dealing with whole persons. In the wider spectrum, the vocational rehabilitation counselor is responsible for overall client management. Close working relationships with him are imperative. Because a client will sometimes be seen without having been referred through a VR counselor, this step should be considered when vocational problems exist.

On the other hand, the audiologist should inventory the prospective client's progress through the logical steps of rehabilitation: medical and hearing evaluations, and any other ancillary service that might be necessary for eventual vocational placement.

In his position, the VR counselor should be ever aware of the hearing impaired client since these conditions are not always as obvious as those arising from deafness. Together, these professional persons can go a long way in providing meaningful services to this handicapped population. ■

Simple Device Aids Retarded

Most mothers would discourage their children from chewing on cardboard. Mrs. Joyce Wall Lewis of Akron, Ohio, is not different, except that she was overjoyed when she discovered her 3-year-old, Merry, who was born with Down's Syndrome, suddenly keeping her tongue where it should be instead of in its usual "hanging out" position.

She investigated. Merry had ingested a small piece of cardboard which closed the high-vaulted palate of her mouth so that her tongue could assume a more natural position. Many retarded children are affected by this problem which impedes proper swallowing and, when learning to talk, affects the formation of vowel sounds and, consequently, speech.

The incident led to a chain of events, all positive for Mrs. Lewis, Merry, and, perhaps, for many other children affected with this condition. Mrs. Lewis found that several patents had been issued for "roof-of-mouth-inserts" (ROMI), but that none of them precisely fit the needs of her child. Five of the seven patented aids called for attachment of the device to permanent teeth, leaving Merry and many others out of the picture because of their age. The other two aids also proved unfeasible.

But the idea was there. It needed refinement. Mrs. Lewis was convinced that a ROMI for her child would help immeasurably in her education and social functioning. After all, she had

Mrs. Lewis and Merry.

witnessed what good a simple piece of cardboard could do! She got together with a dentist and a speech therapist, and they designed an artificial and removable palate that is held in place by suction.

There has been no controlled research done in Merry's case so that comparisons to other children cannot be made at this time. That the device did help Merry, however, is evidenced through these words by her speech therapist: "The ROMI served as a motivating factor in Merry's keeping her tongue in her mouth for longer periods of time. This naturally improved her appearance. Her chewing at meals was less messy and, therefore, less noticeable."

Merry now attends a full day in a normal preschool curriculum at Crown Point school in Bath, Ohio. Mrs. Lewis attributes a great part of this progress to her daughter's learning to use the device. In fact, just recently Merry uttered her first clearly spoken and complete sentence.

The ROMI is a simple dental-plastic appliance made from a plaster impression of the child's mouth. A dental adhesive cream and a little pressure are all that is needed to keep the device in place.

Mrs. Lewis and her husband said that they will not seek a patent on this appliance because they feel that anyone with a retarded child should not be hampered by legal complications to improve upon the device as it suits the needs of their child. But they admonished, "Anyone interested in trying these techniques should do so only with the guidance and direction of a dentist and a speech therapist."

Delighted by what they feel is a victory, the Lewises said that they would happily share their experience with the ROMI with other parents whose children might benefit from it. The dentist in this case is also willing to give specific instructions to other dentists who might be interested. Address all inquiries to Mrs. Joyce Lewis, in care of Ms. Linda Knight, *Mental Retardation News*, P.O. Box 6109, 2709 Avenue "E" East, Arlington, Texas 76011.

[This article is based on a story appearing in *Mental Retardation News*, December 1972.]

Sociolinguistics And

Orlando L. Taylor, Ph.D.

SCHOLARS IN LINGUISTICS and the linguistic sciences have begun to pay increased attention to the subject of language variation. In turn, their work—usually discussed under the rubric, "sociolinguistics"—has had impact on several applied disciplines, central among which are English, education, psychology, and speech pathology.

There are at least three reasons for the upsurge of sociolinguistic research and application. First, the society has begun to demonstrate increased sensitivity to the heterogeneous character of the American population. Second, the nation's minorities, especially blacks, have acquired increasingly more political power, particularly in the central city, and have simultaneously begun to demand more community services geared to their special needs, aspirations, life styles, and their language. Third, many academic and applied disciplines, including rehabilitation disciplines, have begun to question and revise traditional philosophies and techniques for delivering services to minority group citizens.

Within the rehabilitation sciences, there has been noticeable movement with respect to awareness and application of sociolinguistic concepts. This paper will focus on some of the ways sociolinguistics can be used to improve speech pathology services in the nation's central cities, with special reference to those segments of the city which are likely to use varieties (dialects) of English which differ substantially from what we call Standard (socially acceptable, educated, middle-class) English. Although focus will be on black central city citizens, the reader is urged to project the information and arguments presented herein to other groups of so-called "nonstandard" speakers inasmuch as there are certain universal aspects of language variation and application.

The reader is urged also to recognize that concepts inherent in contemporary sociolinguistic theory could be useful for other disciplines in the rehabilitation sciences. For instance, psychiatrists, social workers, clinical psychologists, all of whom depend heavily on verbal interaction, might well improve their understanding of their clients and their problems—as well as make themselves better understood by their clients—by being more familiar with various urban dialects. Likewise, administrators of various psychological, educational, and social tests might use a knowledge of urban dialects to determine whether a particular instrument contains verbal items which might not be understood by certain clients and, thereby, result in an overall score reduction.

Finally, physicians might improve their communications with patients by understanding the various verbal and nonverbal (body language) symbols that might be encountered from patients in an urban community.

Some Basic Assumptions And Definitions

Before getting to the topic at hand, certain basic sociolinguistic definitions and concepts need to be presented. They are as follows:

- Sociolinguistics is the study of the affects of sociocultural variables (e.g. ethnicity, social class, education, social setting, etc.) on language and language use.
- All cultures have concepts and all cultures have linguistic systems to represent these concepts. All

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human languages are adequate for expressing the concepts of the cultures in which they exist.

- While languages of the world have identifiable differences, there are, nonetheless, numerous similarities among them.
- Linguistic differences typically exist within a given culture. These differences are called "dialects" and are related to cultural, social, and historical facts.
- In most cultures, certain dialects have high social prestige and may be referred to as being "standard." Often, standard dialects are those which are adopted by schools or used in books. There is nothing innately good about standard dialects.

About Black English

A substantial amount of recent sociolinguistic research and writing has focused on "black English," or the varieties of English spoken or understood by a substantial number of persons of Afro-American descent. (This statement is not intended to imply that "black English" represents the only area of concentration of contemporary sociolinguistics. Indeed, attention has been given to numerous other topics, such as social stratification of language in urban settings and language behavior of Spanish-speaking, Indian, and white Appalachian groups.) Black English has the largest number of speakers of so-called Nonstandard English dialects, particularly in urban areas. In general, this work has concentrated on (1) the historical development of black English, including African origins; (2) linguistic descriptions of black English; and (3) how black English can be used to teach Standard English to black children.

There are different varieties of black English. While research on linguistic divergence within black English has been minimal, there is informal, empirical evidence to suggest that differences exist as a function of such variables as age, sex, amount of education, geographical region, social situation, etc.

Despite apparent differences in black American speech, there is a core of features that frequently appear in all dialects. (Fasold and Wolfram, 1970 have prepared an excellent summary of the state-of-art on black English features.)[1] Examples of some of the more common features of black English are as follows:

- Absence of copula verb, e.g., "he black": "he is black"; "who he": "Who is he"; "I yo friend": "I am your friend."
- No distinction in gender for third person plural pronouns. For example, "he" can mean both "he" and "she" in the Gullah of South Carolina and Georgia.
- Distinction between second person singular and second person plural. In Gullah, for example, "you" is represented by "yu" (singular) and "yuna" (plural).
- Prefixing or suffixing of third person plural objective case pronouns for noun pluralization, e.g. "dem boy": "those boys."
- No obligatory morpheme for plural, e.g., "fifty cent": "fifty cents."
- No obligatory marker for third person singular of verbs, e.g., "he work here": "he works here."
- No obligatory marker for possessive, e.g., "John cousin": "John's cousin."
- Use of specific phrases to announce beginnings of sentences, e.g., "dig," "Look here," etc.
- Use of intonational ranges to mark meaning differences.

There are two major issues pertaining to the historical development of black English. One view, the dialectologist view, claims that the features of black English are explainable as extensions of Southern English (cf. Williamson, 1971).[2] Presumably, whatever differences exist between black English and contemporary Southern English are related to a perseveration of certain archaic forms because of the history of poor educational opportunities for Southern blacks. The second view, the creolist view, holds that black English has evolved as a result of several West African languages (e.g. Hausa, Wolof, Twi, Mende, etc.) coming in contact with several European languages, both in Africa (Portuguese, Dutch, French, and British English) and in North America (mainly Southern white

English). A detailed description of the creolist view is contained in Dillard (1972).[3]

Sociolinguistics, Black English, and the Field of Speech Pathology

There are several implications of the above discussions to the field of speech pathology. Several of these are presented below.

Attitudes. Perhaps the most important implication of recent sociolinguistic and black English data and theory has to do with attitudes toward language variation. Specifically, a careful analysis of the literature should help the speech pathologist view language variety as a normal phenomenon, and not necessarily as an indicator of communication pathology. This outlook is viewed as a critical first-step for developing speech and hearing programs compatible with the types of language likely to be heard in central cities in general and black communities in particular.

Definitions. The next important implication of recent sociolinguistic research relates to the definition of pathological speech. Traditional definitions of speech disorders (e.g., Van Riper, 1964) [4] have typically categorized speech as being pathological if it deviates sufficiently from the "norm" to (1) cause a breakdown in communication; (2) call attention to itself; or (3) cause the bearer to be maladjusted. Definitions of this type, because they imply measurement of everybody's speech according to some particular norm (middle class white, of course), can and have been used to categorize the legitimate speech behavior of black children as pathological. For example, a sentence such as "That cat, he be busy" (which does not mean a man or an animal is busy as many persons presume) can result in a communication breakdown between a black child and a white therapist. Its utterance in a prestigious or formal white setting might well attract unusual attention. Repeated negative reactions toward it could cause the speaker to become "sensitive" about its use.

It should go without saying that certain kinds of standard speech could, likewise, be considered "pathological" in settings such as Harlem or South Side Chicago. Of course, the latter situation would hardly elicit diagnoses of pathology. Because of the white orientation of the U.S. and many speech pathologists, black linguistic performance is typically evaluated according to white norms. Thus, the legitimate language behavior of thousands of blacks,

particularly in urban northern schools, is evaluated as being pathological. This situation can be altered by applying contemporary sociolinguistic data in defining black speech. The result would require determining a communication pathology on the basis of the norms of the speaker's linguistic community.

Norms. To date, speech pathologists have typically used the verbal behavior of middle class white children for determining parameters of normal speech. To be sure, some scholars have studied differences in language behavior and acquisition between populations with standard (white) and nonstandard (usually poor or black or both) speech. However, most of the research has measured the linguistic performance of the latter group on the basis of that of the former group. The results of this research have been both predictable and obvious and have almost always concluded that children from groups not in the mainstream have some sort of language impoverishment or deficiency.

Obviously, new normative data are needed for evaluating the verbal behavior of individuals from the many linguistic communities of the U.S., especially in the heterocultural and heterolinguistic city. Data and theory from recent sociolinguistic literature can be useful in establishing newer and fairer norms.

Tests. Given that appropriate normative data can be obtained, the need for valid testing instruments

based on black culture and language could become another area of concern. At the moment, most, if not all, of the major test batteries used by speech pathologists are based on "standard" norms. This fact means that such standbys as the Illinois Test of Psycholinguistic Abilities, the Peabody, and the Language Modalities Test of Aphasia must be recognized as having diminished value for speakers of nonstandard dialects or for those who come from "nonmainstream" cultures.

That standard tests are typically based on concepts which may be unnatural or unfamiliar to such individuals should be obvious. For example, a test which views the pronunciation of the word *toothbrush* as "toofbrush" as indicative of an articulation error—as opposed to a dialect difference—causes the administrator to make a faulty speech judgment. Likewise, the test which penalizes a subject for saying that *he from Chicago* (as opposed to *he's from Chicago*) as not being a possible grammatical sentence fails to consider the fact that dialects of English may have different rules for constructing sentences of similar underlying meaning. Indeed, such tests may cause the administrator to inaccurately conclude that a subject is 1 to 2 years retarded in language acquisition (and possibly mentally retarded) when, in fact, the subject is *ahead* of the linguistic expectations for his or her speech community.

Until tests are developed which tap black linguistic and cultural concepts, one cannot be certain whether black children or adults are demonstrating pathologies or differences. *In view of the dialect problem in testing, rehabilitation professions should strongly consider declaring a moratorium on using all white-oriented tests in nonwhite communities and encourage the development of dialect-fair instruments.* Obviously, sociolinguistics could and should play a major role in this area.

Diagnosis. Diagnosis involves the utilization of symptomatology, etiology, history, etc., to determine the nature of a problem. Given the absence of appropriate normative data and tests for blacks, little is known about what a legitimate pathology actually is, especially at various ages during childhood. For example, no one knows when to expect the acquisition of the use of the copula to express the continuative aspect of verbs, as in "I be hungry every morning." Until such data are available, it is virtually impossible to determine legitimate language pathologies for blacks, except when deviations are so gross as to make them obvious. Sociolinguistic concepts can help improve this situation.

Therapy. Again, the same shortcomings exist. Until something is known about the developmental patterns of black English, little can be seriously postulated about when or if speech or language therapy should begin or its course once it has begun. The problem is not limited just to the black child with legitimate pathologies, but also includes the adult client. For example, what are the implications for teaching the *he be busy—he busy* distinction to the black aphasic? Certainly, it seems inappropriate to teach a sentence like "he is busy" for production purposes if the client rarely, if ever, said it premorbidly. Again, the possible use of sociolinguistic concepts for resolving this problem is obvious.

Some Implications

If the recommendations contained herein are accepted, serious demands would be placed on the training of new speech and hearing therapists, practicing therapists, and teachers of therapists. In short, a massive retraining and training mission would be required, especially for professionals in urban areas where most of the jobs exist and where Third World people will constitute more than 50 percent of the total population by 1975. The American Speech and Hearing Association and other appropriate professional bodies should provide the appropriate leadership for undertaking this training mission.

If the training mission is undertaken, a myriad of research questions must be answered. Some of these questions have been mentioned already: language acquisition norms; relationship among speech, reading, writing, and auditory comprehension; aspirations of people in "nonstandard" speaking communities; feasibility of teaching various linguistic components at different chronological ages; and so forth. Some can be answered by existing scientists. Others must be answered by scholars in other fields or by a new breed of interdisciplinary and avant-garde language scientists. Research of this type must be encouraged and financially supported by appropriate professional bodies and funding agencies.

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ACCOUNTABILITY, Emphasis For The Future

Frederick T. Spahr, Ph.D.

Disorders of human communication are an important concern to the health, education, and welfare of many citizens of our country. Communication includes hearing, language comprehension and usage, and speech. Disorders of communication include hearing, speech, language, reading and writing; either singly or in various combinations. The complexity of a communication impairment is further compounded when the impairment occurs secondary to, in association with, or as a result of other impairing conditions. The effects of a communication impairment may profoundly affect the occupation, health, and the psychosocial adjustment of the communicatively impaired adult.

Speech pathologists and audiologists are those professionals whose education and training have focused on the systems, structures, and functions that make human communication possible. Consequently, they are uniquely qualified to understand the causes and effects of delay, maldevelopment, or disturbance in human communication, and to manage the identification, evaluation, and rehabilitation of people with speech, hearing, and language disorders.

Speech pathology-audiology is both a scientific discipline and a profession. As a discipline, it is concerned with the study of the processes of individual human communication and its disorders. Its research provides the scientific base for understanding of speech, hearing, and language as well as for developing and refining techniques that lead to changes in communication behavior. This knowledge is used as a basis for the practice of the profession.

As a clinical profession, its practitioners provide services for persons whose educational, vocational, or social achievements are impaired by disorders of speech, hearing, or language. The diagnostic and therapeutic services needed by these persons are made available through a variety of clinical settings—rehabilitation centers, programs of special pupil services in schools, and private practice facilities. The major goal of the profession of speech pathology and audiology is: *Efficient and economical provision of quality services to all communicatively handicapped individuals.*

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Need And Utilization

It is estimated that over 16 million adult Americans over the age of 21 have communication handicaps to a degree requiring rehabilitative services.* Although it is possible to define this population according to age and type of communication disorder, there is little reliable information about the percentage receiving speech pathology and audiology services. Estimates show a large percentage of adults as not receiving rehabilitative services. Although communication disorders are one of the most prevalent of all handicapping conditions, they rank lower, both in numbers served and funds expended, than many other disabling conditions for which services are provided by State agency and federal rehabilitation/health programs. Because of a paucity of qualified speech pathologists and audiologists many persons have not received services. Provider shortage is not, however, the only reason. Others include maldistribution of providers of speech pathology and audiology services as well as the accessibility of, and demand for, needed services.

Maldistribution of clinical services is not unique to the profession of speech pathology and audiology. The lack of uniform provision of health services is a problem facing the health care delivery system. Undoubtedly, the percentage of communicatively handicapped not receiving needed services is much higher for the handicapped residing in the inner-city and rural areas than for those who reside in the suburbs.

In some areas of the country, an adequate supply of qualified professionals is available to provide services, but the services are simply not accessible to many in the area. Inaccessibility is most often

**Human Communication and Its Disorders: An Overview,* U.S. Department of Health, Education, and Welfare, Public Health Service, National Institutes of Health, Bethesda, Maryland 20014, NINDS Monograph No. 10, 1970.

a result of the traditional delivery system. Clinical services to adults are provided in hospital clinics, community speech and hearing centers, university facilities, and rehabilitation centers. In essence, the client comes to the clinic to receive the services. The traditional system presents unnecessary barriers to many communicatively handicapped people seeking services. Many are confined (e.g., patients in nursing homes, inmates in penal institutions, etc.) and are unable to travel. Many do not understand what services are available or know how to go about getting information about them. Many cannot get to the place where services are provided. They have trouble making appointments, securing transportation, locating the appropriate building, and locating the communication disorders unit in the maze of corridors of a complex rehabilitation center.

As is the situation with most rehabilitation services, demand for speech pathology and audiology services is closely related to economic factors—the payment mechanism for services. Many communicatively handicapped adults cannot afford the costs of speech, language, and hearing services. The circle is a particularly vicious one for those people whose disorders act as a barrier to gainful employment. Demand for services, however, increases directly when reimbursement for services is provided by private and governmental third-party payment programs.

The future energies of the profession will undoubtedly be directed to the issues of maldistribution, accessibility, and demand. In the area of training, some academic programs have already established courses and practicum experience to provide students with the bases for meeting the unique needs of the geriatric, inner-city black, and Spanish-surnamed persons, among others. Future training goals must incorporate expanded opportunities for students to gain greater understanding of the cultural and social characteristics of various populations within our society.

The delivery system for language, speech, and hearing services must be renovated so that services are brought to the people. The future will bring innovative mechanisms to provide increased accessibility of services for the communicatively handicapped such as the incorporation of speech and hearing services in outreach programs and the use of mobile vans for testing and treatment. Future expansion of services depends upon the increased awareness of the general public and greater understanding by colleagues in other professions of the nature of services provided by speech pathologists and audiologists. All too often, the communicatively handicapped person is left with a sense of hopelessness when medical treatment is terminated or rehabilitation counseling concluded without his receiving appropriate information concerning available services for the communication problem.

If the national attitude is one of concern with quality of life and not just survival, then reimbursement for speech pathology and audiology services will become increasingly more common under third-party payment programs. In the past, national organizations such as the American Speech and Hearing Association and the National Association of Speech and Hearing Agencies, as well as State speech and hearing associations, have been major advocates of the needs of the communicatively handicapped. With increased public education and consumer awareness, greater participation by the

A group of college students, majoring in audiology, learns manual communication methods. Instruction will help them later in their work with deaf clients.

communicatively handicapped is foreseen in the expansion of services. Such participation should result in greater attention paid by public and private agencies to their needs.

Quality And Standards

Almost all professions have established some mechanism to recognize qualified people within their professions. The process is termed "credentialing." Attainment of professional credentials usually involves formal higher education plus experience. In the health fields, certification and licensure are the two most widely used credentialing practices. Attainment of the credential provides recognition by the profession that a person has met preestablished standards and is competent to provide clinical services. Often, the credential requirements become the standard of reference for education and training.

Both certification and licensure are used to identify providers of speech pathology and audiology services. The American Speech and Hearing Association (ASHA) awards Certificates of Clinical Competence in speech pathology and audiology to association members who meet specific educational and experiential requirements. Six States now license speech pathologists and audiologists with the requirements for licensure being essentially the same as those for ASHA certification. In addition, departments of education in all 50 States and the District of Columbia have established certification requirements for speech, language, and hearing personnel employed in the public schools. However, requirements for certification granted by departments of education vary widely among the States.

In addition to licensed and/or certified speech pathologists and audiologists, there is a relatively small corps of supportive personnel who, by virtue of on-the-job training and minimal education, are deemed capable to provide specified services to the communicatively handicapped under the professional supervision of a licensed or certified speech pathologist or audiologist.

In the past few years, serious questions have been raised about the assumption that fulfillment of educational and experiential requirements for the credential ensures competency. It is argued that many requirements seem arbitrary. For example, the fact that a person has fulfilled X number of supervised hours in the area of articulation disorders, is not sufficient to ensure that he can accurately

Tactile Speech Indicator

The telephone is accepted by much of the world today as an integral part of communication. For young David Pepito, however, this instrument of modern technology represents more than just a necessary commodity or a hostile nuisance. For him the telephone is a device which provides his "loneliness" with a welcome relief. David is 19 years old; he is totally deaf and blind; he has restricted use of his hands; and he is confined to a wheelchair.

A world of greater security and communication has now been opened to him, and to others like him, as a result of the research work done by Hugh L. Moore, Assistant Dean of Los Angeles Valley College and Lecturer in "Telephone Communications" at California State University, Northridge. Mr. Moore has developed a telephone device—the tactile speech indicator—which allows deaf-blind people to engage in satisfying conversations and social contacts.

The new instrument was presented at a training session for counselors and other persons from agencies associated with the deaf and the blind. The session was held in Northridge, California. The audience heard comments from several deaf-blind people who use the device. They also watched as David Pepito demonstrated his ability to communicate over the telephone by using Morse Code and by receiving specific vibrations in answer to his carefully phrased questions.

The tactile speech indicator presents a wide range of possibilities, both practical and personal, for handicapped users. In addition, this simple telephone device helps to relieve the deaf-blind of a degree of their isolation, thus enabling them to experience the joy of a new-found independence and self-reliance.

Any reader wishing to obtain information about training opportunities for deaf-blind people in the use of the tactile speech indicator should contact Dr. Ray L. Jones, Director, Center on Deafness, California State University, Northridge, 1811 Nordhoff St., Northridge, Calif. 91324. ■

evaluate articulation behavior or provide appropriate remediation for disorders of articulation.

Critics of the traditional system of credentialing advocate the use of competency-based criteria. Establishment of competency-based criteria generally adheres to the following steps: (1) ascertainment of the kinds of judgments necessary to fulfill specified responsibilities; (2) determination of knowledge and skills necessary to make judgments; (3) establishment of procedures to impart knowledge and train skills; and, (4) evaluation of competency to make judgments based on knowledge and skills attained. Such a system may also provide multiple entry into the profession because competencies may be achieved by means of channels in addition to institutions of higher learning and approved clinical settings. In the years ahead we should look for the profession of speech pathology and audiology to increase its efforts substantially to establish competency-based criteria in the training and credentialing of its practitioners.

Clinical competence is not a static status. Recognition of a person's present-day competence implies that his knowledge and skills are current. In speech pathology and audiology, there is no mechanism for evaluating a clinician's ongoing practice in providing services to the communicatively handicapped. This situation is almost certain to change in the next decade. Renewal of certification-licensure will be required, and renewal will be based on evidence that clinical competency has been maintained.

If the traditional approach is used renewal of the credential will probably be based on validation that the speech pathologist or audiologist has engaged in continuing professional education activities designed to up-date knowledge or train new skills. It is possible, however, that credential renewal may be based on a system of peer review.

In brief, peer review means that the judgments and behaviors of the person are measured against an established standard of practice and found to be acceptable or unacceptable. The standard of acceptable practice may be established by statistical averages derived from ongoing practice in the field. This method assumes "What is" is "What should be." Or, the acceptable practice standard may be established by the best judgments of experts. This "best judgment" method increases the likelihood that "What should be" will become the standard for acceptable practice. Thus, under this system, the credential is only renewed for people who have demonstrated that their practice conforms to the standards of the profession, based on one of the peer review models described.

Economics And Cost/Benefit

One of the major issues confronting the profession today concerns the training, supervision, and utilization of supportive personnel. Increasing costs in the delivery of health/rehabilitation services have resulted in finding ways to change the delivery system. The utilization of supportive personnel (i.e., paraprofessionals or aides) is often cited as one way to decrease costs and increase quantity of services by eliminating the involvement of highly trained professionals in the performance of routine tasks.

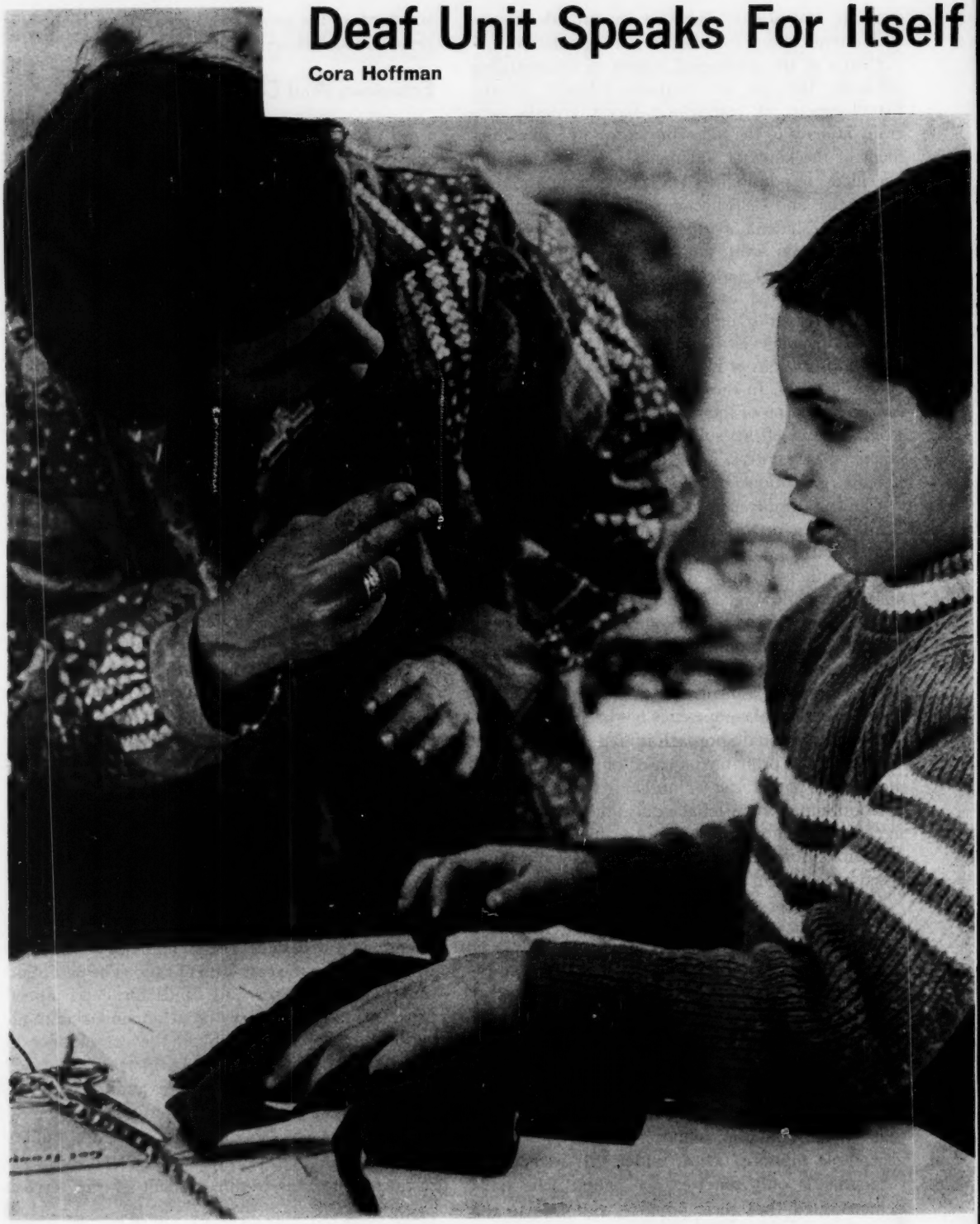
The profession of speech pathology and audiology has not developed a systematic approach to the training and supervision of supportive personnel (i.e., communication aides and audiometric technicians). Similar to other professions, supportive personnel in the speech, language, and hearing field are generally trained on-the-job in the traditional manner. Supervision is usually provided by qualified speech pathologists and audiologists.

Dissimilar to some other professions, speech pathology and audiology has not developed a large corps of supportive personnel. Because on-the-job training of communication aides and audiometric technicians is frequently limited to specific tasks in a particular clinic, this method of training limits horizontal mobility of supportive personnel and blocks career mobility. Currently, on-the-job training does not include formal education which is required to achieve professional credentials. In the future, a change in the method for training supportive personnel to include a more formal education that can be used for career mobility is likely to occur as a means to increase the number of supportive personnel in the profession.

A second issue related to the economics of providing speech pathology and audiology services is concerned with the cost/benefit ratio. The past trend of providing services and funds for handicapped programs based primarily on a humanitarian motivation no longer substantiates the continuance of such services. Providers will be increasingly called upon to verify the costs of services and to document observable benefits to communicatively handicapped (i.e., a change or difference in employability status, learning, health, psychological and social adjustment, etc.) as a direct result of the services provided. ■

Deaf Unit Speaks For Itself

Cora Hoffman



"Sometimes this place seems more like a social club than a psychiatric ward," said Dr. Syed Abdullah, a psychiatrist at Rockland (Orangeburg, N.Y.) State Hospital's special unit for the deaf.

The description is a good one.

In the traditional psychiatric unit, a visitor often feels a rapport with the staff but is sorry for the patients who are sometimes disoriented and find it difficult to communicate. This just isn't true in this special unit. Instead there is a feeling of "togetherness." Patients and staff seem to merge into one group working toward the same goals—good therapeutic psychiatric treatment and improved communication skills.

The most striking example of the camaraderie on the unit is that everyone who lives or works there is able to communicate manually—in sign language or finger spelling. All communication, even group therapy, is conducted with these techniques. Employees are happy to translate the manual signs into verbal language for visitors.

"The patients feel at ease here among people who can understand their problems and with whom they can communicate," said Dr. John D. Rainer, chief of psychiatric research in medical genetics at the New York State Psychiatric Institute. Dr. Rainer and Dr. Kenneth Altshuler, who is chief of the unit, oversee the special unit and its affiliated programs.

Manuel, a shy and smiling 20-year-old boy, exemplifies the benefits that can be derived from this atmosphere of acceptance and specialized psychiatric care. He contracted meningitis and became deaf when he was very young.

After 5 years in a general hospital in Puerto Rico, Manuel was released and lived with his grandparents. He was completely isolated and had no social relationships whatsoever until he moved to New York with his mother a few years ago. When he was admitted to the unit 1½ years ago, he still had virtually no means of communication.

Today Manuel is able to communicate and can even write his own name. "He is happy here because he's accepted," Dr. Altshuler said.

The need for a special inpatient unit to provide intensive treatment for patients like Manuel was demonstrated as a result of an SRS-funded research project which began in 1955 and ran through 1962 under the direction of the late Dr. Franz Kallmann, together with Drs. Rainer and Altshuler.

During the course of the project, which was designed to investigate and define the special mental health problems of the deaf and bring modern psychiatric techniques to bear on their treatment, the country's first psychiatric outpatient clinic for the deaf was opened at the New York State Psychiatric Institute in Manhattan. The project researchers also located, documented, and followed all deaf patients in the department's psychiatric hospitals throughout the State.

The researchers found that many of the 300 deaf psychiatric patients scattered around the State were able to receive relatively little help. They generally had reduced or altered communication skills and often were inaccurately diagnosed, poorly evaluated, and virtually untreated. Many of these patients had been labeled schizophrenic by psychiatrists unfamiliar with the normal characteristics of deafness.

"It is often difficult to tell how much behavior is due to schizophrenia and how much is due to deafness," Dr. Bruce Sarlin, a unit psychiatrist, explained. "Grammar has less meaning to the normal deaf person because his life is pictorial. That kind of language can easily be mistaken as a symptom of schizophrenia."

As a result of these findings, a second SRS-supported research project was designed to remedy the limitations in treatment for deaf patients. The second project, which ran from 1963 to 1966 had as its goal the demonstration of a special inpatient unit for the deaf in addition to the expansion of outpatient services already underway.

The special facility, the first of its kind, was opened at Rockland State Hospital in 1963. It housed 15 men and 15 women and provided a staff fluent in manual language and able to define and meet the individual treatment needs of deaf patients. On its staff are psychiatrists, a psychologist, a rehabilitation counselor, an occupational therapy instructor, teacher, secretary, nurses and attendants—all able to communicate manually. The ward has its own occupational therapy workshop, interview rooms, special examination rooms, dining room, and conference room.

At first, only patients from State hospitals were admitted to the unit. After the facility began to function smoothly, however, acute cases from the community were accepted, and toward the end of the grant period, chronic patients from State hos-

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Cora Hoffman is a staff writer with Mental Hygiene News, *Albany, N.Y. The story is reprinted from that publication with permission.*

Occupational therapist (photo, left) instructs client on how to proceed with current project. Photo by Julian A. Belin

pitals were rotated to the unit for a period of trial treatment whenever a space became available. These patients were returned to their home facilities when they had achieved maximum benefit from the unit program or were no longer improving.

A change in the State's mental hygiene law made it mandatory that all new deaf patients admitted to any of the State's psychiatric hospitals be reported to the unit. Unit staff members make frequent trips to each of these facilities to evaluate, diagnose, and advise regarding treatment of these patients. The patients are scheduled for admission to the special deaf unit as soon as possible.

The unit's program also continued to expand and be modified to better serve the patients. "We've had both men and women patients on the unit since 1964," Dr. Altshuler said. "And our token economy program began many years ago. These things are just currently being implemented in traditional psychiatric wards as treatment methods. We did them because they just seemed the best way of doing things at the time."

In 1966, the entire inpatient and outpatient service was taken over by the State as a permanent psychiatric program of the Department of Mental Hygiene under the egis of Rockland State Hospital.

At this point, although the researchers were pleased with the gains that had been achieved in the treatment of deaf psychiatric patients, the need for an even more far-reaching program became evident.

"A total rehabilitative and preventive program was needed," said Dr. Rainer. "We became aware of this need through our experience in working at the outpatient clinic and through our affiliation with the New York School for the Deaf in White Plains."

Continued admission and readmission of patients being treated at the outpatient clinic showed that more needed to be done to help these people maintain the gains they had achieved.

And the staff's observations at the New York School for the Deaf proved that the emotional difficulties the deaf students faced were nearly insurmountable and often led to psychiatric symptoms.

Continuity of care and cooperation among State facilities, community agencies and voluntary organizations became the keynotes of an expanded program. The special unit at Rockland assumed the role of nucleus and nerve center for an innovative and intensive program combining inpatient and outpatient treatment, aftercare services, vocational training, social rehabilitation, prevention, and education.

The goals of good continuous psychiatric care, rehabilitation, and prevention were accomplished by placing staff members who are directly affiliated with the deaf program in the various locations where they would be available to help deaf people who have psychiatric symptoms.

One unit staff member, Huberta Schroedel, an occupational instructor, is assigned to Fountain House, a halfway house in New York City, where many former psychiatric patients live immediately after their release from the hospital. This team member, herself deaf, provides counseling and encouragement for the deaf residents at Fountain House. Working together with the other personnel there, she helps the residents look for jobs and apartments, makes sure they keep therapy appointments, and acts as liaison between Fountain House residents and the unit staff at the hospital.

The unit also has a rehabilitation counselor, Jean Badanes, who works together with community agencies such as the Office of Vocational Rehabilitation. This counselor helps to train deaf people for employment and keeps abreast of job opportunities. She also participates in home visits and visits to places where former patients are employed.

The unit's affiliation with the New York School for the Deaf has been expanded to provide more intensive and comprehensive services to the pupils, their teachers, and their parents. The main goal here is prevention. Teachers and parents are given the help and encouragement they need to recognize and overcome psychiatric problems before they become severe.

Outpatient services have also been expanded to make sure patients receive the treatment they need in order to maintain themselves outside of an institution. An important aspect of the outpatient services is that the patients see the same doctors who cared for them during their hospital stay or at the outpatient clinic. This continuity of care greatly enhances the patient's ability to cope with day-to-day living situations. The doctor is well acquainted with the patient's individual problems and better prepared to treat him. At the same time the patient is spared the added burden of becoming acquainted with a new therapist.

The outpatient is also involved in vocational rehabilitation with the help of the local office of OVR, and is provided recreational and social activities at the outpatient clinic.

Dr. John Vollenweider, Rockland psychologist, makes a point using manual communications as he prepares a client for a test procedure. Photo by Julian A. Belin

Voluntary organizations for the deaf have been encouraged to take part in the social activities of both the outpatient clinic and the special unit at the hospital. It's not uncommon to find many deaf people visiting the unit at Rockland who are not psychiatric patients at all. They are other deaf people from the community who come to the hospital to be with friends.

The unit staff has also undertaken an education program for the community. Staff members meet with leaders of organizations for the deaf and with psychiatric professionals to explain the unit's mental health and rehabilitation program.

All of these diverse aspects of the team effort are brought together by means of weekly meetings of the unit at the hospital. Team members who work outside the unit report on patients who are under their jurisdiction. They ask advice of the staff who treated those patients when they were unit residents.

For example, Mrs. Schroedel, the occupational instructor assigned to Fountain House, came to a recent staff meeting equipped with a lengthy list of questions regarding her patients.

"Mary is having some difficulty integrating into the family with which she was recently placed," Mrs. Schroedel told the unit staff in sign language. "Do you think she's capable of handling the situation or should we move her back into Fountain House?"

After some discussion, Dr. Abdullah gave instructions to let Mary stay with the family. He assured Mrs. Schroedel that he would discuss the problem with Mary in their next therapy session.

Personnel from other hospital units that house deaf residents also are invited to the meetings to receive advice from the experts.

Lonny, one of four deaf patients at Rockland's new children's hospital, is a handsome dark-haired child. His doctors are concerned over his slow progress in manual communication and academic subjects. His intelligence is slightly above average, and although Lonny has been coming to the deaf unit every day for school, he still has very primitive communication skills. His doctors at the children's hospital have come to the meeting to ask the deaf unit to modify and increase Lonny's schedule of classes.

Edward Tucker, the unit teacher who is himself deaf, reports that Lonny is capable of faster progress, but his daily session on the deaf unit is only one hour. And it usually requires a half hour for him to settle down after the unstructured atmosphere at the children's hospital.

After a thorough discussion of Lonny's case, the staff members of the two units decide to change Lonny's medication so that he will be more receptive to the teaching on the deaf unit and to increase his time on the unit to one-half day.

"The women on the unit have adopted him," a nurse said. "He'll certainly get a chance to practice his communication skills with them."

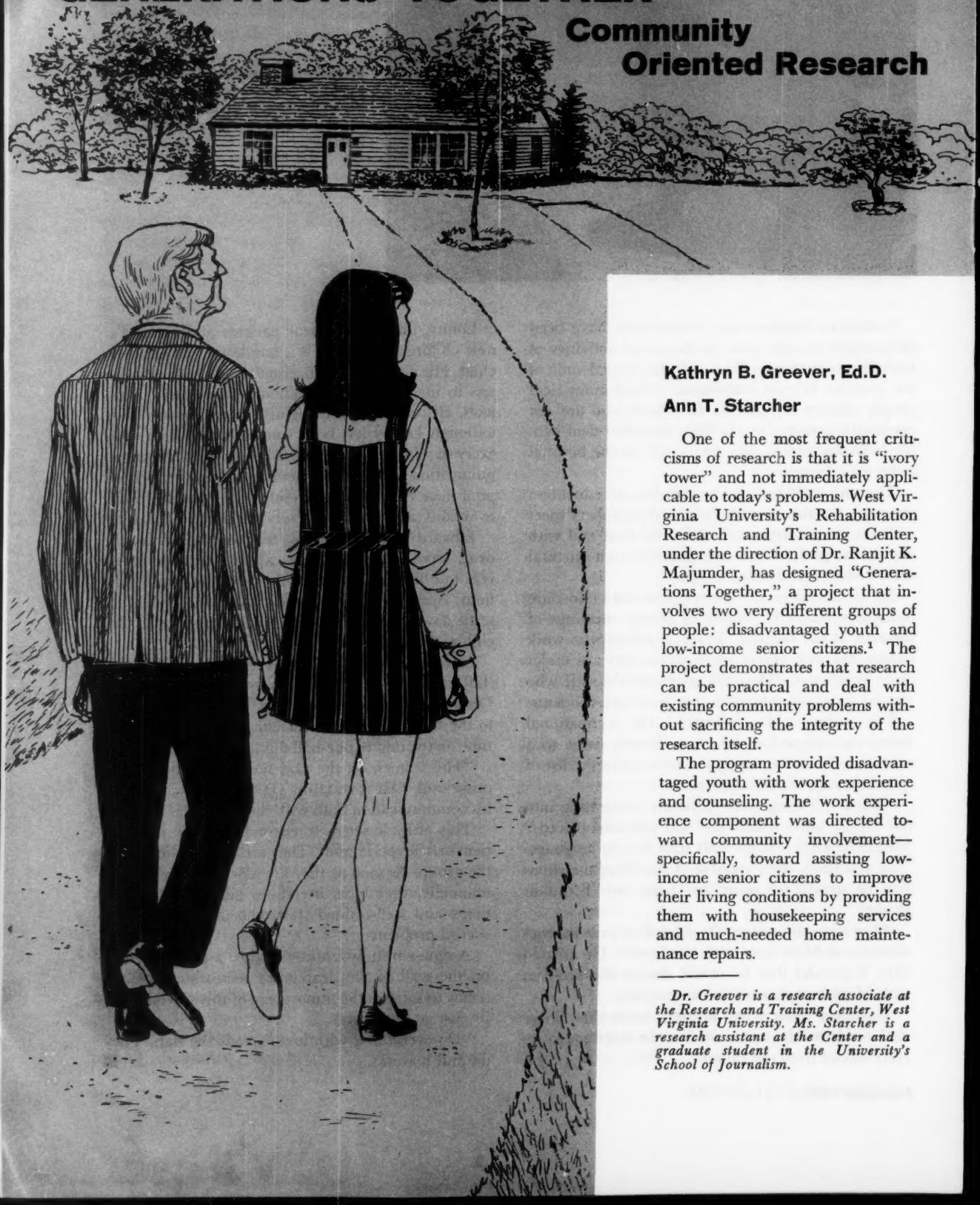
This attitude seems to encompass every new patient on the special unit. They are all "adopted" into the group. As soon as they are able to communicate manually, they have friends to talk to—other patients and well-trained staff who understand their special problems.

A sign, carefully embroidered by a patient, hangs on the wall of the deaf unit's recreation room. It seems to sum up the atmosphere of this special place in just a few words.

"Do everything with love," reads the sign. They do and it works. ■

GENERATIONS TOGETHER

Community Oriented Research



Kathryn B. Greever, Ed.D.

Ann T. Starcher

One of the most frequent criticisms of research is that it is "ivory tower" and not immediately applicable to today's problems. West Virginia University's Rehabilitation Research and Training Center, under the direction of Dr. Ranjit K. Majumder, has designed "Generations Together," a project that involves two very different groups of people: disadvantaged youth and low-income senior citizens.[1] The project demonstrates that research can be practical and deal with existing community problems without sacrificing the integrity of the research itself.

The program provided disadvantaged youth with work experience and counseling. The work experience component was directed toward community involvement—specifically, toward assisting low-income senior citizens to improve their living conditions by providing them with housekeeping services and much-needed home maintenance repairs.

Dr. Greever is a research associate at the Research and Training Center, West Virginia University. Ms. Starcher is a research assistant at the Center and a graduate student in the University's School of Journalism.

Directing work activities of these young people toward helping the low-income senior citizens provided planned benefits for both groups. The purpose was to turn the youth's awareness of disadvantagement into an awareness of what can be done for the community by its own people using their own resources plus the resources of social agencies and volunteer groups. At the same time, the senior citizens were able to benefit from having a wide range of home maintenance and housekeeping services provided at no cost to them. This gave both groups an opportunity to get to know one another in an atmosphere of mutual involvement and helped the senior citizens become more aware of the community's concern for their well-being.

The counseling part of the project was vocationally oriented. It was designed both to assist the young people in career decisionmaking and to provide them with personal skills which would increase their self-confidence and vocational aspirations so they would be better able to take responsibility for, and give direction to, their lives.

Twenty-five boys and girls, ages 14–20, were selected from low-income families in the Dellslow, Osage, Scotts Run, and Saberton sections of Monongalia County in West Virginia to aid some 20 senior citizens in those areas. The youths were paid $1.60 per hour for 40 hours a week to participate in this 8-week summer project during July and August 1972. About 10 percent of their time was spent in counseling activities, and the remaining 90 percent was spent in working on a variety of projects. These activities included digging water lines, putting in septic tanks, cleaning yards, painting, making room additions, repairing roofs and porches, and housecleaning. All work was supervised by local community volunteers.

The group also participated in a rehabilitation needs survey by interviewing senior citizens concerning the kinds of community, social, and medical services that were available or should be provided. In addition to those activities, the youths from Osage elected to visit a nursing home and talk with the patients, just to get to know them and spend some time with them.

The project's success was a result of the cooperation of the local Welfare Department, Welfare Rights Organization, and Senior Citizens Committee with the Research and Training Center. Representatives from these groups [2] assisted in identifying senior citizens needing help, provided supervision, appeared twice on a local radio station as members of a panel to discuss the project,[3] and solicited building materials and supplies from local businessmen.

The Welfare Department was able to make available up to $300 in materials for eligible senior citizens. Because the necessary labor was provided at no cost to the Department, the project was able to triple the amount of return on the Welfare Department's contributions.

Perhaps the best description of the need for the work done by these young people, and the way it was received in the community, comes from excerpts from an article which appeared on August 3, 1972 in Morgantown's local paper, *The Dominion News*:

> The road is deeply rutted and rock-strewn, cutting back into the hillside and winding for nearly a mile. It is the trail Miss Nellie Maust walks practically every day. Miss Maust is 61 years old, is hard of hearing and has failing sight. She lives alone in a small house next to that isolated path, surviving on $66 a month from welfare and food stamps. She hauls her water from a cliff a half-mile from her house. It is a lonely, hard life. "Generations Together," a local group of youngsters, is working to help Miss Maust.

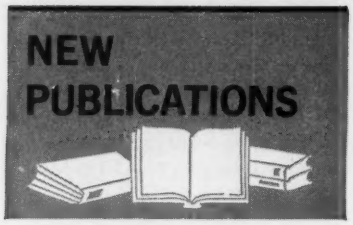
This article describes the activities of the young people in clearing land and preparing to build a home for Miss Maust on land owned by her sister-in-law.

Discussions with the youths who participated in the summer project indicate that they developed a deeper understanding of the problems of senior citizens and were personally proud of being able to help these people in their community. "I liked getting to know the old folks," or "They seemed to like to have someone to talk to" was typical of the responses of these young participants. The senior citizens were pleased with the work done and were surprised at its quality. For example, one 68-year-old lady said, "I was worried about getting my roof fixed before winter and, thanks to these kids, I don't have to worry about it any more."

Though no concrete research conclusions may be obtained until all the data have been processed, preliminary results indicate that the disadvantaged young people did experience an increase in feelings of confidence and self-worth and looked more positively on the future.

The most outstanding example from the project was the change in the life of one unemployed high school dropout. During the summer program he was made super-

(*Continued on page 29.*)



Special Report 1972–1: New Dimensions in Training Rehabilitation Facility Personnel. 30 pages; and **Special Report 1972–2: Some Current Concerns of Rehabilitation Facilities.** Division of Service Systems, Rehabilitation Services Administration, Department of Health, Education and Welfare, 330 C St., S.W., Washington, D.C. 20201. 35 pages.

Both of these publications are a compilation of selected materials from the Third Annual Conference of the International Association of Rehabilitation Facilities, Chicago, Ill., May 7–10, 1972.

Special Report 1972–1 includes papers from a panel discussion on "New Directions in Training Rehabilitation Facility Personnel" and a report of an inservice training project. The emphasis in this publication is on the increased utilization of the potential educational resources of the rehabilitation facility.

Panel members were William M. Usdane, Assistant Commissioner for Program Development, RSA; George E. Ayers, Assistant Vice President and Professor, Minnesota Metropolitan State College; Kenneth W. Hylbert, Director, Rehabilitation Education Programs, The Pennsylvania State University; and Leonard Weitzman, Executive Director, Vocational Rehabilitation Center of Allegheny County.

Special Report 1972–2 is divided into four sections: 1) the dynamics of change; 2) service purchase agreements between State VR agencies and rehabilitation facilities; 3) rehabilitation facility accreditation: points of view; 4) planning the utilization of rehabilitation facilities.

Research for People In Need. Division of Research Utilization, Social and Rehabilitation Service, 330 C St., S.W., Washington, D.C. 20201. 62 pages.

All the journalistic and artistic points of excellence are observed in this monograph. It is clear, to the point, attractive, airy, well illustrated. If utilization is the name of the game, the book's physical appearance should attract people to read on into its pages (the major utilization reason of applying art in publications).

As an iconoclast, its pages are filled with the concept that research is not necessarily "Ivory Towered." All the processes are there alright, but people are there, too. The people who benefit from the processes.

Twenty-seven projects that have had an impact on lessening disability, fulfilling human needs, and uplifting the quality of life are reviewed in a straightforward manner. They concern themselves with people who are on the welfare roles, disabled people, the elderly, and the young.

The booklet is intended for the professional worker, but it can be read with benefit by anyone.

—R. Bourgea

Abstracted papers of Philip J. Rutledge, Deputy Administrator, Social and Rehabilitation Service, DHEW; Craig Mills, Director, Division of Vocational Rehabilitation, Florida; Robert J. Wolfe, Chief, Rehabilitation Facilities Development, Department of Rehabilitation, California; E. Russell Baxter, Commissioner, Arkansas Rehabilitation Services; Harry W. Troop, Deputy Director, Facilities Planning and Development, Illinois; J. W. Cowen, Rehabilitation Facilities Specialist, Division of Vocational Rehabilitation, Alabama; W. Scott Allan, Assistant Vice President, Liberty Mutual Insurance Companies, Boston, Massachusetts; Norbert Reinstein, Planning Associate, United Community Services, Detroit; and Thelma Schmones, Assistant Regional Representative, Rehabilitation Services, SRS, Region II, DHEW.

Coping With the Unseen Environment. Herbert Rusalem. Teachers College Press, 1234 Amsterdam Ave., New York, N.Y. 10027. 361 pages. $11.50.

General rehabilitation agencies around the country are gradually incorporating visually impaired individuals into their multidisciplinary programs. This trend provides rehabilitation workers with a new and added responsibility for which many are not fully prepared. Relatively few rehabilitation personnel receive effective training and orientation regarding the special needs of the blind.

Addressing itself directly to this problem, the book presents an overview introduction to the vocational rehabilitation of blind persons. The publication hopes to provide those workers having little experience or preparation in this specialized field with a better understanding of the blind and of their problems.

The book is divided into three main sections covering: the general difficulties of blindness in American society, the rehabilitation process as it relates to the blind, and special considerations in the vocational rehabilitation of these individuals. An extensive list of references and a detailed index are also included.

A Discussion of Schizophrenia. (Conducted by) Dr. Lewis L. Robbins. Juliet R. Halpern, editor, Social Service Department, Hillside Hospital, Box 38, Glen Oaks, N.Y. 11004. 66 pages. $1.75.

Based on a series of informative lectures and discussions used in a seminar on schizophrenia, this booklet provides professionals in psychiatric hospitals and in other institutions with a body of knowl-

edge intended to augment and supplement their understanding of this perplexing disease. Dr. Robbins, who is Medical Director, Hillside Hospital, begins his presentation with a general thesis on schizophrenia; he then substantiates his ideas with data and evidence based on what is currently known about the nature of the schizophrenic process. Therapeutic implications and available treatment services are also dealt with in this comprehensive publication.

National Conference on Rehabilitation Services For the Deaf. (Report compiled by) Vernon L. Glenn, Ed. D. Arkansas Rehabilitation Research and Training Center, University of Arkansas, West Avenue Annex, 346 North West Ave., Fayetteville, Ark. 72701. 29 pages.

The Committee on Rehabilitation Services for the Deaf held a national conference in Little Rock, Arkansas in February 1972. A summary of the conference proceedings is presented in this report. The publication sets forward the purpose of the 3-day meeting which was to formulate a strategy recommendation and to present a plan of action to the Council of State Directors of Vocational Rehabilitation.

Volunteers For People In Need. Dorothy Rigdon, editor. International Association of Rehabilitation Facilities, 5530 Wisconsin Ave., Suite 955, Washington, D.C. 20015. 159 pages. $2.

Fourteen papers and a summary of group discussions that formed the body of a conference on research utilization are reproduced in this volume. The SRS-supported conference took place in Washington, D.C., in June 1972. Three of those papers (by authors Diane Roupe, Edward Aud, and Joseph Kohn) were printed in the January–February 1973 edition of the *Rehabilitation Record*.

The in-depth papers look into the psychological, economic, and legal aspects of volunteering. Exemplary programs are presented. And, generally, the philosophy and direction of volunteering are expounded.

On Dying and Denying. Avery Weisman, M.D. 207 pages. $9.95 (hard cover). **Death and the College Student.** Edwin Shneidman, Ph.D., editor. 247 pages. $9.95 (hard cover); $4.95 (soft cover).

The first book is a treatise on dying and the denying mechanisms that man has devised to avoid facing the final hour. It tells how professional people can be supportive of terminal patients.

The second book is a collection of 19 essays written by college students in a Harvard course on death and suicide. In one of the essays a student places an ad in a Boston daily, announcing his intention to commit suicide unless someone gives him a good reason why he should not. He then studies the 176 replies to his ad, which range from offers of free counseling to a box containing a peach pit.

The books should be of interest to many persons working in the rehabilitation field, especially those working with the severely physically disabled and the emotionally ill.

Illinois Legislation for the Handicapped (Including Veterans and Their Families). Division of Vocational Rehabilitation, 623 E. Adams St., Springfield, Ill. 62706.

A summary of recent State legislation affecting handicapped persons is presented. Also discussed is information about available services to handicapped persons, including those services offered by the State Department of Vocational Rehabilitation.

Generations Together

(*Continued from page 27.*)

visor of one of the work groups. At the end of the summer, he got a job as an electrican's helper and is now considering returning to a vocational-technical school to continue his education.

A review of the evaluation forms completed by parents shows an extremely positive attitude toward the program and included such remarks as, "I'd like to see this kind of program continue," or "It is a good program."

"Generations Together" is an example of research that met its primary investigative goals, and, at the same time, made an active contribution to the community.

Notes

(1) This research was supported by the West Virginia Regional Rehabilitation and Training Center (RT–15) through Social and Rehabilitation Services, Department of Health, Education, and Welfare.

(2) Organizational representatives include: Ms. Alice van Landingham from Senior Citizens, Ms. Shirley Dalton from Welfare Rights Organization, Ms. Sue Beard from the Welfare Department, and Dr. Ranjit K. Majumder and Edward Swarbrick from the Research and Training Center.

(3) Morgantown radio station WCLG, with Ms. Terry Belck as moderator.

Martha Verkuilen in summer training at Tradewinds Rehabilitation Center, Gary, Indiana.

A New Breed In Rehabilitation

Janet Zastrow, Frances (Posie) Schauder, Sue Witeck, and Henry Redkey

For many years the emphasis in training for rehabilitation has been at the graduate level. But now there are a few undergraduate programs and the question in students' minds is: "Will there be a job for me with my baccalaureate degree?" To answer that question we went to prospective employers of all types for the answer. The answers reflected a pronounced interest in this training.

An eleven-question survey was sent to a random sample of 129 rehabilitation facilities across the nation. These facilities included State rehabilitation agencies, sheltered workshops, day care centers, hospitals, and facilities sponsored by larger affiliated organizations, such as Easter Seal, Goodwill, and the Jewish Vocational Service. An 81 percent response was received.

Each prospective employer was told what rehabilitation students study at the University of Wisconsin-Stout and how that training is organized.

The University is located in northwest Wisconsin, 66 miles from Minneapolis. This has proved to be convenient because the rehabilitation students have access to several excellent facilities in the Twin Cities for field trips and, in some cases, summer employment. Much cooperation has been given to the Stout undergraduates by agencies both in northwestern Wisconsin and in the Minneapolis/St. Paul areas for developing their understanding and interest in the expanding field of rehabilitation. Stout's undergraduate rehabilitation program is relatively new, having started only 3½ years ago. Interest in the program, however, has greatly increased. The enroll-

Janet Zastrow, Frances Schauder and Sue Witeck are undergraduate students at the University of Wisconsin-Stout, Menomonie, Wisconsin. Henry Redkey is Professor of Rehabilitation there.

ment has risen from 3 students in the fall of 1969 to over 200 in January 1973.

The Academic Program

Stout's vocational rehabilitation curriculum is designed to provide realistic training experience. It is divided into four areas: general studies (40 credits), rehabilitation studies (40–44 credits), restricted electives (12–16 credits), and a concentration (minor) in one of the following: business, industrial arts, home economics, or physical education (28–30 credits). Free electives amount to 18–20 credits and, in addition, each student spends one summer working in a rehabilitation setting.

After completing the required 130 credits, the student is expected to have achieved a number of learning experiences:

- An overview of public, private, federal, State and county organizations of rehabilitation services;
- Exercises focusing on kinds of disabilities served and the peculiar problems they present;
- Contacts with people of various disabilities: mentally retarded, cerebral palsied, deaf, blind, etc.;
- Knowledge of the rehabilitation process;
- Understanding of rehabilitation facilities—sheltered workshops, day care centers, mental health centers, rehabilitation centers, evaluation centers—and actual exposure to programs of welfare, employment service, and the Office of Economic Opportunity;
- Contact with people of various disciplines in rehabilitation: rehabilitation counselors, evaluators, executives, psychologists, physical therapists, prosthetists, and social workers;
- Limited experiences working in different types of agencies serving clients: sheltered workshops, departments of vocational rehabilitation, county hospitals, evaluation and training centers, Office of Economic Opportunity, institutions for the mentally retarded, and day care centers;
- Work evaluation methods and elementary counseling techniques;
- Limited exercises in collecting, analyzing and synthesizing both objective and subjective data, such as medical, psychological, sociocultural, and other data into a meaningful rehabilitation plan;
- Experience in selecting appropriate psychological tests and work samples;
- Conducting a job analysis;
- Preparation for client staffings;
- Application of techniques of work adjustment and training to problems of the handicapped;
- Theory of the job placement process and followup.

The Survey

The study posed 11 questions, which were designed to measure reaction of rehabilitation programs and facilities across the country to job possibilities for graduates with a degree in vocational rehabilitation from the University of Wisconsin-Stout.

The questions were:

1. How do you classify your agency:
   A. State rehabilitation agency
   B. Hospital
   C. Sheltered workshop
   D. Rehabilitation center
   E. Day care center
   F. Sponsor (Goodwill, JVS, Easter Seal, etc.)
   G. Other (specify)

2. Estimate the number of your professional staff that have:
   A. Master's degree in VR
   B. Master's degree in some other field
   C. Bachelor's degree in VR
   D. Bachelor's degree in some other field
   E. High school graduate or other

3. After reading the description of student learning experiences in the bachelor of science program in vocational rehabilitation at Stout would you consider hiring such a person?

4. Do you now have funded vacancies that could be filled by persons with a B.S. degree in VR?

5. What positions would persons with a B.S. degree in vocational rehabilitation from Stout quality for in your agency?

6. Please state current beginning salaries for bachelor of science degree vocational rehabilitation applicants for those positions.

7. Bachelor of science degree students in vocational rehabilitation at Stout are required to take 28 additional credits of concentration in the field of business, home economics, industrial arts, or physical education. Do you think such a concentration is: very important, important, or not important?

Questions 1 and 2

Who Works In Rehabilitation Now?

Training Of Persons Employed In Rehabilitation

[In percent]

	Master's in vocational rehabilitation	Master's in another field	Bachelor's in vocational rehabilitation	Bachelor's in another field	Other
State rehabilitation agencies, n=51	16	20	3	46	15
Rehabilitation facilities, n=54	5	17	.3	46	32

8. What suggestions do you have for improving the bachelor degree program in vocational rehabilitation at Stout?

9. Please rank the education in these fields in the order of importance in your agency, number 1 being highest and 4 being the lowest: industrial arts, home economics, business, physical education.

10. General comments:

11. Would you like a list of available graduates from time to time?

The results of the questionnaire were encouraging as they proved that bachelor degree graduates in vocational rehabilitation are needed throughout the country, not only in State agencies, but also in a variety of rehabilitation facilities both private and tax supported.

For ease in presentation the seven agency classifications found in question number one of the survey have been condensed into two categories, State rehabilitation agencies and rehabilitation facilities.

Question 3

Agencies Which Would Consider Hiring A Bachelor Of Science Degree Person In Vocational Rehabilitation

[In percent]

	Yes	No
State rehabilitation agencies, n=51	90	10
Rehabilitation facilities, n=54	93	7

Question 4

Positions In Vocational Rehabilitation[1]

Key Positions In State Agencies[2]

	Percent n=51
Rehabilitation Counselor	57
Work Evaluator	47
Placement Counselor I	39
Instructors	25
Rehabilitation Coordination	24
Other[3]	20
Work Adjustment Supervisor	18
Vocational Counselor	17
Work Supervisor	13
Subcontract Procurement	12
Social Worker I	10

[1] Job titles are those chosen by respondents and probably overlap in some instances.

[2] Jobs that were acknowledged by at least 10 percent of those responding to the questionnaire were considered key positions.

[3] Other than those positions listed on the questionnaire, 20 percent of the State agencies responded to the following:

(1) Vocational Rehab. Trainee I
(2) Disability Examiner Trainee
(3) Rehabilitation Counselor II
(4) Rehabilitation Technician
(5) Rehabilitation Interviewer
(6) Counselor Intern

Question 4

Key Positions In Rehabilitation Facilities[1] *n=54*

	Percent
Work Evaluator	72
Placement Counselor I	61
Instructors	50
Vocational Counselor	48
Work Supervisor	46

Chippewa County Hospital in Wisconsin is site for Ginny Varva's rehabilitation workshop training. (Photo above)

Student Rocky Nelson (photo, left) checks a production detail with client while supervisor "checks the checker."

Work Adjustment Supervisor	43
Subcontract Procurement	39
Rehabilitation Counselor I	37
Caseworker	28
Employment Interviewer	28
Production Manager	28
Workshop Manager	28
Rehabilitation Coordinator	28
Day Care Supervisor	20
Group Worker	19
Volunteer Services Coordinator	17
Other [2]	17
Administrative Trainee (Rehabilitation)	15
Workshop Director	13
Manpower Counselor	11

[1] Jobs that were acknowledged by at least 10 percent of those responding to the questionnaire were considered key positions. Job titles were chosen by respondents.

[2] Other than those positions listed on the questionnaire, 17 percent of the rehabilitation facilities responded to the following:

(1) Inservice Training Instructor
(2) Recreational Personnel
(3) Houseparents
(4) Professional Interpreter

From the tabulation of question number four it was concluded that although funded vacancies is a more restrictive term, even here the demand for bachelor of science degree students in rehabilitation is great.

Most agencies would employ Stout bachelor degree graduates in rehabilitation with a beginning salary between $6,500–$8,500. Many of the agencies stated specifically that this was a starting salary and that there was room for advancement.

From the answers to question seven it was concluded that agencies did feel that the concentrations (minors) were important. Business and industrial art concentrations were most sought with home economics being third and physical education fourth. The major, of course, in all cases is vocational rehabilitation.

Most respondents asked to be furnished lists of available graduates.

Question 11

Agencies Requesting Lists of Available Stout Bachelor Degree Graduates In Rehabilitation

[In percent]

	Yes	No	No answer
State agencies, n=51	67	27	6
Rehabilitation facilities, n=54	72	24	4

To the students' question, "Will there be jobs for which I can qualify," the answer is "Yes." ■

The author looks at HR 1: Its meaning and some of its implications for the vocational rehabilitation field.

Income Maintenance & Rehab For the Blind and Disabled

John W. Delaplaine, Ph. D.

The impact of Public Law 92–603, known as the Social Security Amendments of 1972 or HR 1, will be quite profound for handicapped persons. Thus, for example, Medicare benefits will be extended on July 1, 1973 for about 1.7 million social security disability beneficiaries.

Further, the Act provides for a doubling of the vocational rehabilitation of beneficiaries from the Disability Trust Fund from FY 1972 to FY 1974. This analysis will focus, however, on the income and rehabilitation benefits of Title XVI of the Act. These new benefits are important, although there is at least one major defect (addressed later on in this article). The good, however, far outweighs the bad, and this is clearly the most important legislation affecting the disabled and the rehabilitation movement in years. The income and rehabilitation provisions, which go into effect on January 1, 1974, should be clearly understood by all present or future handicapped persons of relatively low income and all who are attempting to aid such persons.

Dr. Delaplaine is a consultant to RSA with the Urban Institute.

HR 1 establishes in Title XVI a Supplemental Security Income (SSI) federal system for the noninstitutionalized aged, blind, and disabled administered by the Social Security Administration, as well as a rehabilitation system for the blind and disabled administered by the Rehabilitation Services Administration (RSA) and State Vocational Rehabilitation (VR) agencies. Both are fully funded by the Federal Government. For the blind and disabled of all ages, a new process is set up of (1) eligibility determination based on income and resources and disability determination (DD); (2) for eligibles, Supplemental Security Income (SSI) payment of a guaranteed income with a work incentive and a trial work period of 12 months; (3) mandated referral to VR for those judged suitable for VR services, and acceptance of services if offered; and (4) VR services delivery. Also, additional services may be provided by others.

The eligible disabled person will benefit from: (1) the SSI payment for nonearners which will be larger than at present in almost all the States as well as uniform between States; (2) the SSI earnings-disregard (work incentive) provisions for blind and disabled earners with a higher break-even point than heretofore existed; (3) elimination or virtual elimination of the eligible blind and disabled from the present welfare systems; (4) improved rehabilitation services delivery from VR as a result of 100 percent federal funding and the growing VR focus on the severely disabled; (5) early identification, SSI payments and possibly services delivery or purchase for eligible handicapped children; and (6) reduction of the VR services gaps and need for outreach activities through combination of the SSI and SSA systems. Thus, by the stroke of a pen, a very high portion of the severely disabled who can be helped by VR will be receiving services and those with low earnings or resources will be receiving payments.

The new HR 1 system for the blind and disabled will be large. Over a million persons will be receiving SSI payments at any time. This will require disability determinations and redeterminations. Perhaps 200,000 people annually will be referred to VR and as many as 100,000 accepted for 100 percent federally funded VR services.

The gross SSI cost to the Federal Government will exceed $1 billion annually, and the VR services cost funding will substantially increase the scale of basic State VR operations. The present Social Security Disability Determination operations will double in size. Finally, the number of *severely disabled* persons reaching VR offices will substantially increase, and the VR system, especially, must find ways to improve services delivery to this group.

HR 1 started out as a minimum guaranteed income plan for families and adult categories (blind, aged, and disabled) and became known for awhile as the "Family Assistance Plan." It was strongly opposed by most liberals and most conserva-

tives, a powerful combination. The family payment provisions were eliminated, and, to make a long story short, with a few strokes of the pen and deletion of Title XXI, a powerful bill was finally passed by the 92nd Congress and signed by the President. The revised bill was and still is opposed by many liberals on the grounds that its focus on disabled and aged persons prevents eventual passage of a guaranteed annual income for all families at an adequate level, with adequacy defined generally at levels with very large budgetary implications. Fortunately both Congress and the President considered the final legislation on its merits and luckily the bill passed when it did.

Most eligible handicapped, including those of all ages, will benefit primarily from income transfers, rather than services delivery. It is estimated that only 10 to 20 percent of those receiving SSI payments will benefit from VR services.

The aged, blind, and disabled eligibles will receive $1,560 per year for a single person or $2,340 for a qualifying couple.

In addition, a person can earn up to $1,020 without losing any of his SSI payments. Above this level, his payment is reduced $.50 for every dollar he earns above $1,020, until the break-even point of $4,140 is reached, except as indicated in the following paragraph.

An eligible couple receives similar earnings-disregard benefits. Thus, a reasonable work incentive is provided on paper for the working poor handicapped. This work incentive is important for the severely disabled. Thus, the median earnings of all VR rehabilitants *with earnings* in FY 72 was only $82.81 or about $4,000 per year. Similarly, about half of the rehabilitants on public assistance do not have enough earnings at present to get off welfare. Finally, the median earnings of both the severely disabled with earnings and disabled workers with earnings under the SSA trust fund reimbursement program are well below the HR 1 break-even point.

There is, however, a curious anomaly in the law. A person no longer is classified as disabled if he earns more than the SSA definition of substantial gainful activity, or $2,100. Thus, as soon as he earns more than $2,100 he loses all his SSI payments. An extra one dollar of earnings causes a loss of over $1,000 of income and a serious notch or disincentive is created, thus eliminating for the disabled most of the important work incentive set up by HR 1. This notch does not exist for the aged or blind. Elimination of this notch for the disabled would cost about 4 percent of SSI benefits to the disabled. It could return more savings to the Federal Government in SSI payments than the cost of the added incentive payments for all.

HR 1's work incentive concepts reinforce the growing RSA and VR awareness of the need to work longer with many VR clients and not to close them out 30 days after placement in a below-poverty-level job. This is becoming increasingly clear in the experience we have gained with all public assistance rehabilitations—about one-half remain on public assistance after closure, although federal payments are reduced.

Under HR 1 and in our regular VR program, we might arbitrarily classify rehabilitations into four categories: R0, no earnings; R1, some earnings to SGA ($2,100 per year) earnings; R2, SGA to HR 1 break-even point (BEP) earnings ($4,140); R3, above HR 1 BEP earnings (above $4,140 per year). Any client might be classified as a rehabilitation but be kept on VR rolls until he reaches R3, or his full earnings potential, whichever is lower.

In addition, a major focus is needed for expansion of job opportunities.

HR 1 presents an exciting challenge to the State rehabilitation systems and to their subsystems, including the private rehabilitation subsystems from which services are purchased. Perhaps substantial money will be available by FY 75–76 for rehabilitation, and matching funds will not be required.

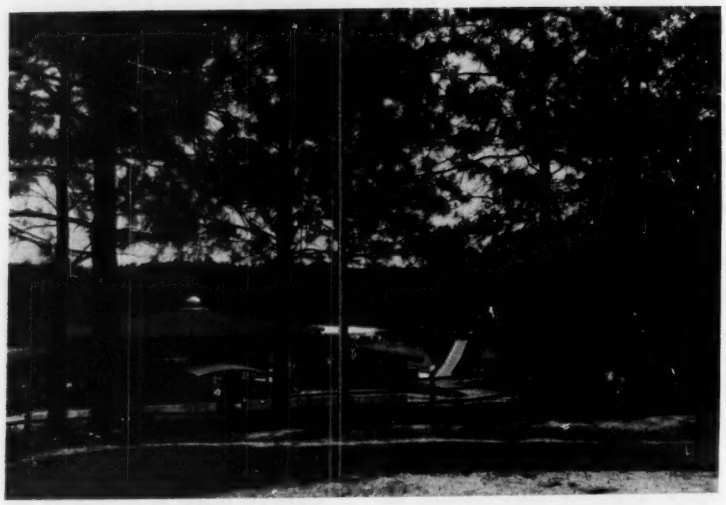
Because of the capacity-building nature of HR 1, the RSA role in terms of creative federalism is to assure adequate State funding for both start-up and ongoing activities, including planning for each, to develop operational mechanisms with the Social Security Administration, as well as to provide guidance for States which desire assistance in the entire area for quality and cost-effectiveness improvement of services delivery. This includes two particularly important areas: (1) reaching more deeply into the severely disabled population which can be vocationally rehabilitated and (2) providing higher earning levels for those served by VR so that they can better achieve their full potential while the Federal Government minimizes its discounted lifetime payments to the individual. Fortunately these are also areas of future emphasis for the entire VR program

Planning is still in its infancy for HR 1, for joint SSA–RSA activities at the federal and State levels, for quality improvement, for job opportunities expansion, and the like. Fortunately, the operating responsibility for the adult categories of HR 1 was entrusted to the Social Security Administration rather than to the other options studied.

VR has a successful track record in delivering similar services in a cost-effective manner to Social Security Disability Insurance beneficiaries, despite a slow initial build-up when the program started in the mid-sixties. Nevertheless, because of the many short and long-run issues involved, it is desirable at this time to initiate truly joint planning activities with SSA since they have ultimate accountability for the overall program. ■

Where There's A

H. E. Bud Van Orden

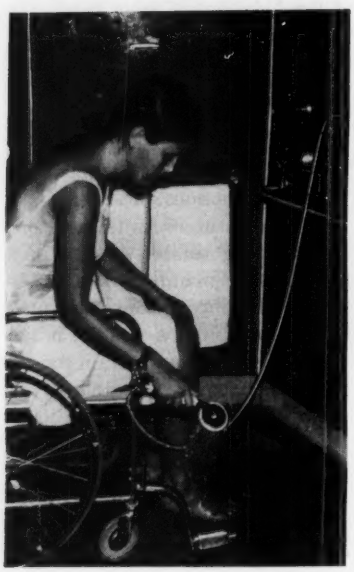


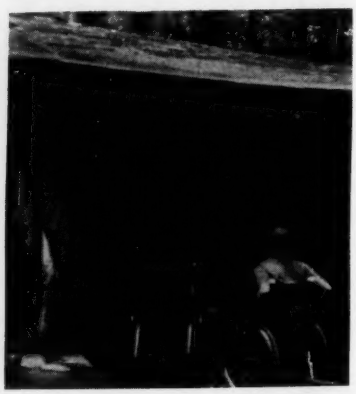
The title of this article is a cliche, true, but one with more human feeling, more personal warmth, and one which more than any other clearly demonstrates the vitality and determination possessed by handicapped people in leaving no stone unturned or no path unexplored in finding a way to participate in life's activities. Named by them, they are daily proving that they indeed have the will, and Camp Will-A-Way is most certainly the way.

"Guess what?" is the question asked family and friends by the handicapped person who has visited Camp Will-A-Way. "Guess what? I have a park built just for me!" And the truth of the matter is, it was.

Recreational and camping facilities have been designed for the outdoorsman since almost time immemorial, but little thought has been given to including the handicapped as potential users of these facilities while the designing process was going on.

That is, of course, until some concerned Georgians thought about all of the State's citizens and about developing a recreational area that could be used not only by the handicapped but also by their families, friends, and those genuinely interested in their needs.





Top photo, a group of campers begins a stroll down the nature trail. Middle, a view of the day-use area at Camp Will-A-Way. Note fishing bridge in background. Bottom left shows accessible shower and, at right, wide entrance to individual cottage.

Mr. Van Orden is Chief, Public Relations and Information Division, Georgia Department of Natural Resources. He is also Executive Secretary, Georgia Governor's Committee on Employment of the Handicapped. The photos accompanying this article were taken by Mr. Van Orden.

Will There's A Way

Planning for the park began in 1965. Construction was not undertaken, however, until every possible effort had been made in searching out similar projects, seeking other professional advice, and compiling all available information on the subject. The search revealed that very little had been done in this area, no similar projects had been built or could be reviewed, and no resources were available to call upon.

Knowing that the park must meet the needs of the handicapped and that it would now be their responsibility to set up the necessary standards and criteria, parks officials began the tedious but worthwhile task of developing a comprehensive plan that would lend itself to constant checking and double checking to insure that their end product would be workable, usable, and above all, a park that the handicapped could call their own, and mean it.

Because of its nature, the project classified as a demonstration effort, and federal funds were requested and obtained to help in the construction of the $1,500,000 recreation facility.

Site selection was extremely important as the complex of recreational services would serve and be available to the State's total handicapped population as well as to all interested persons who could benefit. Fort Yargo State Park was chosen as the ideal location since it serves nearly 50 percent of the State's population in a 75-mile radius. Also, within 150 miles of the park are sections of Alabama, North Carolina, South Carolina, and Tennessee. The site virtually creates a regional park for the handicapped.

A new twist developed for the handicapped person and his family with the opening of Will-A-Way. In the past, the family would wonder what to do with a handicapped member when they were going away because of the lack of proper facilities for use by physically limited persons. Unique as it may sound, this situation has been reversed. Now the handicapped person can say, "What must I do with the family while I am at camp?" Fortunately an answer was built into the design and plans for campers at Will-A-Way. It is: "Bring 'em along!"

Family Cottages Area

Vacation-style family cottages are available for rent to any family with a handicapped member. They can be rented by the week (2 week limit) from June through August and by the day from August to May. Each cottage has two bedrooms with a single and a double bed in each as well as a sofa bed in the living room. It is capable of accommodating seven persons quite comfortably. They are completely furnished, including linens, dishes, and kitchenware; and they have built-in appliances.

They sound just like any other great vacation cottages, but they aren't. They aren't like any vacation cottage, apartment, room, and for that matter, house, that the handicapped camper has ever visited much less lived in before. Why? Because they were not built for the family with a handicapped member. They were built for the handicapped member of the family.

Architects developed a whole new meaning to the word design. All doors in the complex are double action doors. Kitchens afford easy accessibility for the wheelchair. Wheelchair occupants can reach all cupboard space, roll up under the sink, and cook a gourmet's delight on the stove. The blind can read important messages from Braille notes taped to switches and other important areas.

Living and dining rooms are relaxing places. Wheelchairs can roll under the tables for eating, playing games, and working on crafts.

Toilets accommodate wheelchairs and include grab bars. Shower heads on flexible hoses are adjustable to standing or sitting heights. Showers also have grab bars.

Light switches are located within easy reach as are all handles and manually operated levers or switches. A lift is available to assist those campers requiring its services.

Reaction to the cottages has been novel. Perhaps the most rewarding experience thus far has been the young couple who chose Camp Will-A-Way as the place to spend their honeymoon. To them, their "honeymoon cottage" and the recreation facilities could not have been duplicated anywhere else.

An international flavor has already reached Will-A-Way, with foreign visitors coming more and more. One handicapped Canadian came and would not register for more than one night, but after spending just 15 minutes in a cottage, he asked permission to extend his stay to 3 weeks.

The cottages are located on one side of the recreational camp in a quiet, secluded, but accessible area. They are in the same general area as the main camp office and day-use area. The unusual day-use area was designed to accommodate all of the family, friends, and handicapped daily visitors as well as those persons staying in the cottages.

Opportunities are available to fish, picnic, boat, and participate in games and other activities. The area is opened and closed on a daily basis. Tables in a beautifully wooded area with surfaced paths and picnic accommodations offer a great opportunity for an outdoor eating experience.

Boating fun is shared by many for the first time. Because of their problems of mobility, campers and visitors have had to forgo this outdoor fun all of their lives, but not at Will-A-Way. Special flat-bottom, pontoon boats allow wheelchairs to roll right aboard. Other boats are available to persons on crutches who don't need to use the pontoon boats.

White sand beaches are traversed by easy sloping walkways leading to cool, clear water where wheelchairs gradually move into the water and a person soon finds himself swimming, wading or just sitting. If a wheelchair doesn't function too well in water or the owner prefers not to get it wet, chairs suitable for water use are provided. Life guards constantly observe all water activity and safety is always apparent.

Games include a putting green for wheelchair golfers, horseshoes, shuffleboard, and for children a playground with special equipment adaptations and a nonslip surface for those who are on crutches.

And then there's the fishing bridge. You can walk or roll right out to the middle of this section of the lake and drop a line on either side of the bridge and just wait. But not for long. Fish at Will-A-Way just seem to like to get caught.

At the very middle of the bridge is a swinging gate which separates all of the activities on this side from those on the other, which is where the group camp is located.

Group Camp

Designed to easily accommodate family camping, the group camp opens a whole new perspective to the family with a handicapped member who wants to camp out. The camp is available to any nonprofit agency, group or organization wishing to utilize its facilities. Along with adult and youth organizations, children are prime users of the group camp.

Facilities here readily lend themselves to organizational use. Groups leasing the camp are responsible for the type of program conducted.

Including campers and staff, the group camp can handle 264 persons on a coeducational basis. Several organizations can share the camp at the same time.

Recreational opportunities similar to the day camp are available here. They include fishing, swimming, boating, and others. There is an advantage, though, for the swimmers who like their water a little warmer than the cool lake water: a heated swimming pool.

Camper's Cabins

Cabins in the group camp are quite flexible in their purpose and design. Each holds 10 campers plus 4 staff members. There is one toilet, lavatory, and shower to serve each five campers, and each fixture is located in separate rooms and, therefore, can be used simultaneously. Each cabin also contains a rinse sink. Separate lavatory facilities are provided for the staff. Should hyperactive campers open cabin doors at night, a buzzer will alert the counselor in his quarters.

Family Camper's Quarters

A pleasant surprise is in store for families or groups of families who enjoy camping out. Each cabin in the group camp can quickly and easily be divided into three parts by simply sliding 7-foot, movable walls, thus making it possible for from one to three families to have private quarters and private bath facilities.

Other Related Facilities

Several other important facilities add to the overall operation of the group camp. Included is a duplex staff cottage, making it possible for men and women staff to have separate facilities or for two families to occupy the duplex cottage. A health lodge provides quick, interim medical service through a staff nurse. Facilities and services are readily available if hospital or medical aid of a more serious nature is needed. Program buildings are located to serve every four camper's cabins and are open shelters designed for summer use, and they contain built-in work tables. The camp includes a utility building with coin operated clothes washers and dryers.

There also is an assembly building where campers may stage performances ranging from plays, recitals, and musicals to choruses, orchestras, and dances. Group instruction can easily be conducted in the performing arts and a theatre in the round design contributes to audience participation and informality. Outdoor activities are greatly enhanced by an outdoor stage.

Nature and arts and crafts activities are conducted in a "nature and arts" building. Stack stools are provided each participant. These allow the activity to move indoors or outdoors at will.

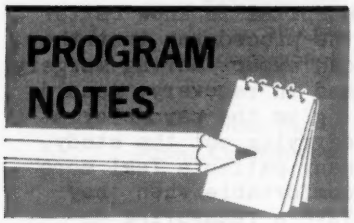
If the outdoors really ranks high on the camper's list of priorities, the campcraft and outpost camp program activity provides a good time as well as instruction in how to live in the out-of-doors. Campers learn fire-building, outdoor cookery, overnight camping, and other related activities.

At the entrance to Camp Will-A-Way, located in the day use area, is the visitor's center, the veritable hub of the camp's activities. The camp office is located here along with a concession stand, refreshment center, first aid room, dressing rooms for the beach area, and an equipment room.

Leading out from the visitor center is a nature trail that explains the natural fauna that grows in the area. Hikers can smell the fragrance of blossoming shrubs and trees and read about each plant from identification markers. Blind hikers, too, can enjoy this fundamental nature experience through Braille markers.

Steps are not present at Will-A-Way. Pathways and roadways with a five percent grade or less traverse the camp. Wide doors, grab bars, wheelchair high tables, low drinking fountains, switches, and every possible architectural innovation has been included whenever possible and practical.

Changes in attitudes, personalities, and a new perspective on living have taken place in the lives of many who have found themselves at Will-A-Way. And why not? It is here, in the quiet surroundings of nature created by God, that the handicapped have found a solace where they belong. ■



"Reading By Ear" Device Under Study In Mass.

• Working with the principle that sound sources can be localized as originating from the left or right (the basis of stereo music) and up and down, scientists at the Worcester Polytechnic Institute in Massachusetts are working on a device that will allow blind persons to read Braille by sound. Before auditory Braille, as it is called, becomes a reality, however, the researchers assert that more basic studies are necessary, but they point to the system's theoretical potential for blind people.

Using photocells "to pick up" the image of the dots in the Braille letter, the information will be translated into various frequencies to the right and left ears. Since Braille uses a series of up to six dots per letter, arranged in one or two rows, one ear will "hear" the dots on the left side of the letter while the other will "hear" those on the right. In the case of the "a", for example, where only one dot is used, the one tone would be perceived as emanating from the left, while the right ear would not receive a sound cue.

How complicated is the learning process to identify the sounds? The following is quoted from the research application: "This coding system is so natural and easy to learn that subjects have been able to master it by listening to a tape recording which lasts about ½ hour. These subjects . . . have been able to identify the positions of various dots and the positions and orientations of vertical, horizontal, and slanted lines."

The same system, the researchers state, could be further developed as a mobility aid and an "imaging" device. These aspects of the system will form the second phase of the investigation.

R&T Center Pub Epitomizes Ongoing Studies

• *Rehabilitation Tomorrow* is a one-sheet, occasional publication of R&T Center-15 that explains its research and training programs and projects in straightforward and precise words. The publication's brevity and compactness should provide busy rehabilitation professionals with easy reference to many questions. Because of its jargon-free style, the peruser should easily know whether or not he would want to request the expanded version of the program or project.

The abstracts are written by Dr. Kathryn Greever, and other staff members, in collaboration with the various program and project directors. Persons interested in receiving this publication may order from: *Rehabilitation Tomorrow*, Research and Training Center, West Virginia Rehabilitation Center, Institute, West Virginia 25112.

SRS Pilot Project Aims: More Jobs For Disabled

• SRS has undertaken a pilot project on employment of handicapped workers. Its goal is to make it a leading governmental agency in this area.

Headed by Ms. Patricia Thoben, the project plans call for a 2-stage strategy: 1) the identification of existing SRS positions that could be filled by persons with physical or mental impairments and the development or redesigning of additional jobs and 2) recruitment of suitable disabled people to fill the positions.

"Our objective," according to Ladd Hamilton, SRS Director of Personnel, "is to develop a plan that other government agencies will want to adopt for their own use."

CORRECTION. Inadvertently the source for three articles on volunteerism in the January-February Rehabilitation Record was omitted. Correct source should have been assigned as follows: These papers were developed especially for a meeting held in Washington, D.C. in June 1972 entitled, "Knowledge Utilization Conference on the Use of Volunteers in Vocational Rehabilitation." The conference was sponsored by the International Association of Rehabilitation Facilities and supported by an SRS grant.

WELL SAID; WORTH SAYING: Modern medicine, it is clear, has given years to our lives. It is now time to put new life into those years. (Henry Viscardi, Jr., L.L.D., in a paper, "Vocational Rehabilitation," presented at the American Cancer Society's National Conference on Human Values and Cancer, Atlanta, June 24, 1972) . . . . For anyone rehabilitation is basically a matter of self-renewal. For the older person it is especially a matter of self-renewal, of becoming useful again. And that is what "aging" is all about—becoming useful. (Arthur S. Fleming in the foreward of the report of the Vocational Rehabilitation Policy and Platform Meeting for the White House Conference on Aging. September 1971) . . . . A person who can't use his physical skills to make a living needs to depend more on developing his intellectual capacities to earn a livelihood. Therefore, a college education is often more important to a handicapped individual and he is able to benefit from such an education more than most nonhandicapped persons. (Dr. Duane Mattheis in an address to a conference on Improving Higher Education Opportunities For Handicapped Students held in Minneapolis, Minn., April 1972).

HEART ATTACK DEATHS from wild heartbeats that often follow heart attacks have been cut by 50 percent by a 2-quart liquid mix that is pumped into the veins. The brew is composed of glucose, potassium, and insulin. Dr. Abdo Bisteni of the National Heart Institute of Mexico said the solution is designed to correct a chemical imbalance in damaged heart cells which give rise to the uncontrolled heart beats. The Heart Research Newsletter of September 1972 reports on the Mexican work and states that the "polarizing solution has been the subject of considerable controversy among heart specialists in the United States."

SUMMER IS INCUMEN IN. The ninth edition of The Wheelchair Traveler is now available. The 3-dollar book may be ordered from The Wheelchair Traveler, Ball Hill Road, Milford, N.H. 03055. The directory lists hotels, motels, restaurants, and sightseeing attractions.

CALLED HYPNOTIC RELAXATION, a taped message helps surgery-bound patients at Brooklyn's Veterans Administration Hospital to know better the procedures that they can expect during surgery and in recovery. According to the psychologist carrying out the study, many patients feel more comfortable when they have a reassuring description of routine procedures such as preoperative medication, sounds heard in the operating room, and recovery time. The tape service also is useful in overcrowded and understaffed hospitals.

HILTON INTERNATIONAL has equipped with special facilities for the handicapped traveler two guest rooms at the Toronto Airport Hilton in Canada. The service offered will become standard in all future company hotels. The rooms have special bathroom fixtures, including a grab rail around the bath; nonslip tub; removable shower head with hose attachment; sliding bathroom door; and wheelchair height toilet bowl. In addition, an entrance ramp makes easier access to the building for wheelchair patrons.

REHABILITATION RECORD

The weakest ink is better than the strongest memory

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